ORDER NO. AD9802029C2

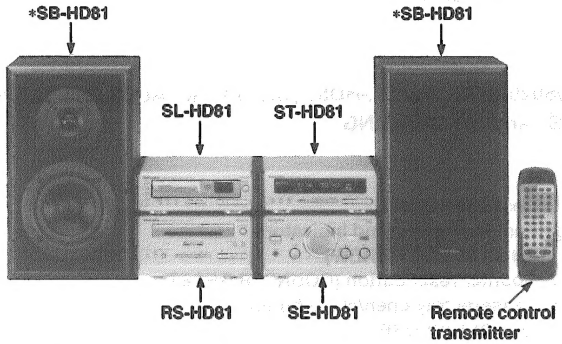
Service Manual

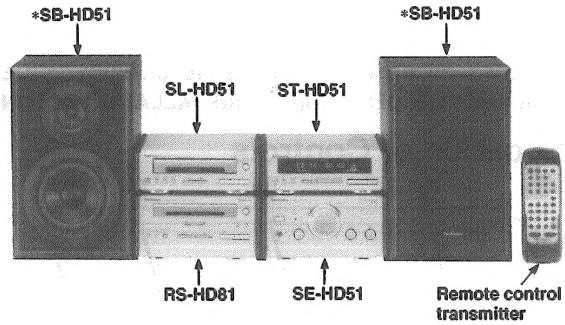
Cassette deck

* DOLBY SYSTEM

Cassette Deck

RS-HD81





Because of unique interconnecting cables, when a component requires service, send or bring in the entire system.

Colour

(N) ..... Gold Type

Area

E ..... Europe.

System : SC-HD51
SC-HD81

AR-1 MECHANISM SERIES

Specifications

Deck system	Stereo cassette deck
Track system	4 track, 2 channel
Recording system	AC bias
Bias frequency	100kHz
Erasing system	AC erase
Heads	
(Recording/Playback head)	Permalloy head
(Erasing head)	Double gap ferrite head
Motors	
Capstan drive	DC servo motor
Reel table drive	DC motor
Tape speed	4.8 cm/s
Wow and flutter	0.1% (WRMS)
Fast forward and rewind times	Approx. 52 seconds with C-60 cassette tape
Frequency response (Dolby NR off)	
TYPE Ⅰ (Normal)	20Hz–17kHz (DIN)
TYPE Ⅱ (High)	20Hz–17kHz (DIN)
TYPE Ⅳ (Metal)	20Hz–17kHz (DIN)
S/N (Signal level=max recording level, TYPE Ⅱ type tape)	
NR off	56dB (A weighted)
Dolby B NR on	66dB (A weighted)
Input sensitivity and impedance	
REC (IN)	280mV/23kΩ
Output voltage and impedance	
PLAY (OUT)	280mV/220Ω

■ **General**

Dimensions (W × H × D)	196 × 103 × 221mm
Weight	1.8kg

Notes:

1. Weight and dimensions shown are approximate.
2. Design and specifications are subject to change without notice.

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY", and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

System/SC-HD51:

Tuner: ST-HD51, Compact Disc Player: SL-HD51, Amplifier: SE-HD51, **Cassette Deck: RS-HD81**, Speaker: *SB-HD51

System/SC-HD81:

Tuner: ST-HD81, Compact Disc Changer: SL-HD81, Amplifier: SE-HD81, **Cassette Deck: RS-HD81**, Speakers: *SB-HD81

Notes:*..... Made in PAES

⚠WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Technics®

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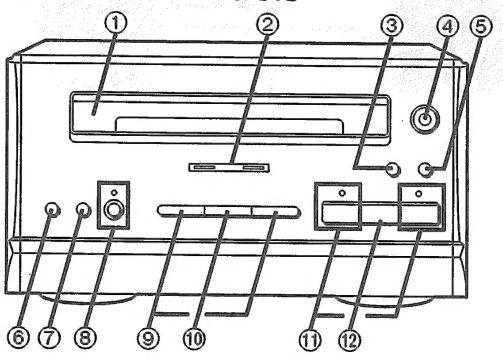
NOTE:

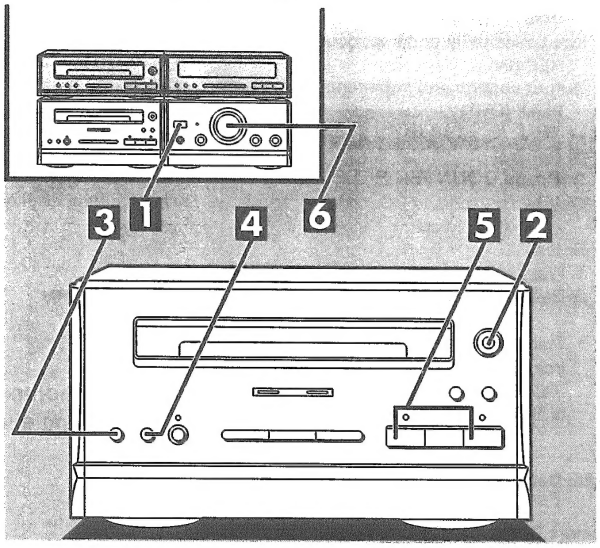
Refer to the service manual for Model No. SE-HD81 (ORDER No. AD9802028C2) and SE-HD51 (ORDER No. AD9802031C2) for information on "ACCESSORIES", "INSTALLATION", "CONNECTIONS" and "PACKAGING".

Location of Controls



① Cassette holder
② Fast forward/rewind indicators (HIGH SPEED FF/REW)
③ Counter reset button (COUNTER RESET)
④ Cassette tray open/close button (▲ OPEN/CLOSE)
⑤ Display button (DISPLAY)
⑥ Dolby noise reduction button (DOLBY NR)
⑦ Reverse mode select button (REV MODE)
⑧ Record pause button and indicator (● REC PAUSE)
⑨ Fast forward/rewind/tape program sensor buttons ([TPS] ◀◀, ▶▶ [TPS])
⑩ TPS skip button (TPS SKIP)
⑪ Playback buttons and indicators (◀, ▶)
⑫ Stop button (■)

Listening to Tapes



Playback

Type of tape which can be played correctly:
The unit automatically identifies the type of tape.

Normal position/TYPE I	○
High position/TYPE II	○
Metal position/TYPE IV	○

1 Switch on the power.

2 Press ▲ OPEN/CLOSE on deck, and then insert the tape.

Load a tape with the exposed side facing the cassette holder's insertion part.
Insert the cassette tape until it touches the back of the compartment.
Press ▲ OPEN/CLOSE once again to close the cassette holder.

Note

Keep your fingers out of the cassette tray so that you do not get pinched when it closes.

3 To listen to a tape recorded in Dolby B NR
Press DOLBY NR and check "□□"is displayed.
When playing back a tape which was not recorded on Dolby NR system, press DOLBY NR so that indications go off.

4 Press REV MODE to select the reverse mode.

Each time you press REV MODE, one of the indicators will appear.

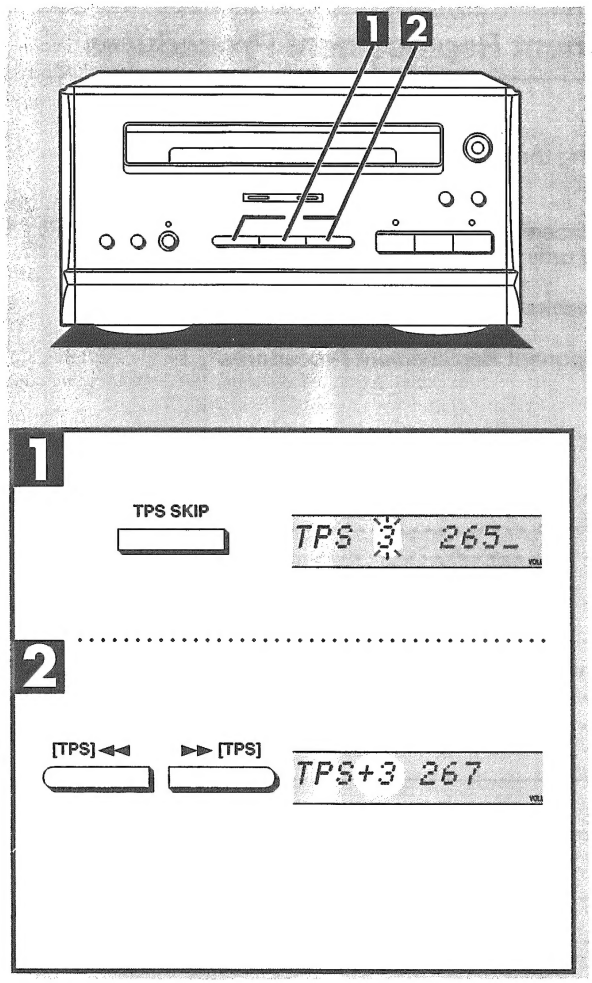
⇄: The deck plays one side only, and then stops automatically.
⇄: The deck plays both sides, and then stops automatically.
⇄: The deck plays both sides 8 times, and then stops automatically.

5 Press ◀ or ▶.

▶: The forward side will play.
◀: The reverse side will play.

6 Adjust the volume level as you like.

To stop tape playback:
Press ■.



To find the beginning of a program (TPS: tape program sensor)

The number of programs corresponding to the number of times TPS SKIP was pressed will be skipped, and the desired program is located (up to 9 programs before or after the program now heard).

1 Press TPS SKIP until selecting the numbers of tracks you want to skip.

Each time you press this button, the display will change as follows:

TPS 1→2→3...8→9→TAPE

2 Press [TPS] ◀◀ or ▶▶ [TPS].

If the forward side (▶) is playing:

▶▶ [TPS]: Skips forward by the number of tracks corresponding to the number you select in step 1. ("+" lights.)

[TPS] ◀◀: Skip backward by the number of tracks corresponding to the number you select in step 1. ("−" lights.)

When you select "TPS 1", the deck will skip back to the beginning of the track you are currently listening to and will start playing it again.

The illustration shows an example when you select "TPS 3" while the forward side (▶) is playing.

If the reverse side (◀) of the tape is playing:

The reverse operation will take place.

Notes

- To change the setting (the number of the programs to be skipped, the tape travel direction, etc.) while TPS skip is activated, press ■ to stop the deck first.
- If the number of TPS skips specified is larger than the number of songs recorded on the tape, the unit may stop at the end of the tape or otherwise fail to operate correctly.

For your reference:

To skip to the next track or back to the beginning of the track you are currently listening to, perform only above step 2.

Notes

TPS is the function that searches for the silent passage in a tape program. So, it may sometimes fail to operate correctly in the following situations:

- When the interval between programs is less than 4 seconds
- When there is a particular low-level passage in a program (for example, classical music)
- When the program is less than 10 seconds, or when it is less than 10 seconds from the listening point to the beginning of the next tune
- When a tape recorded with fade-ins or fade-outs

Operation Checks and Main Component Replacement Procedures

NOTE

1. **This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**
2. **For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.**
3. **Select items from the following index when checks or replacement are required.**
4. **Refer the parts No. on the page of "Main Component Replacement Procedures", if necessary.**

• Contents

• Checking Procedure for each P.C.B. Page.

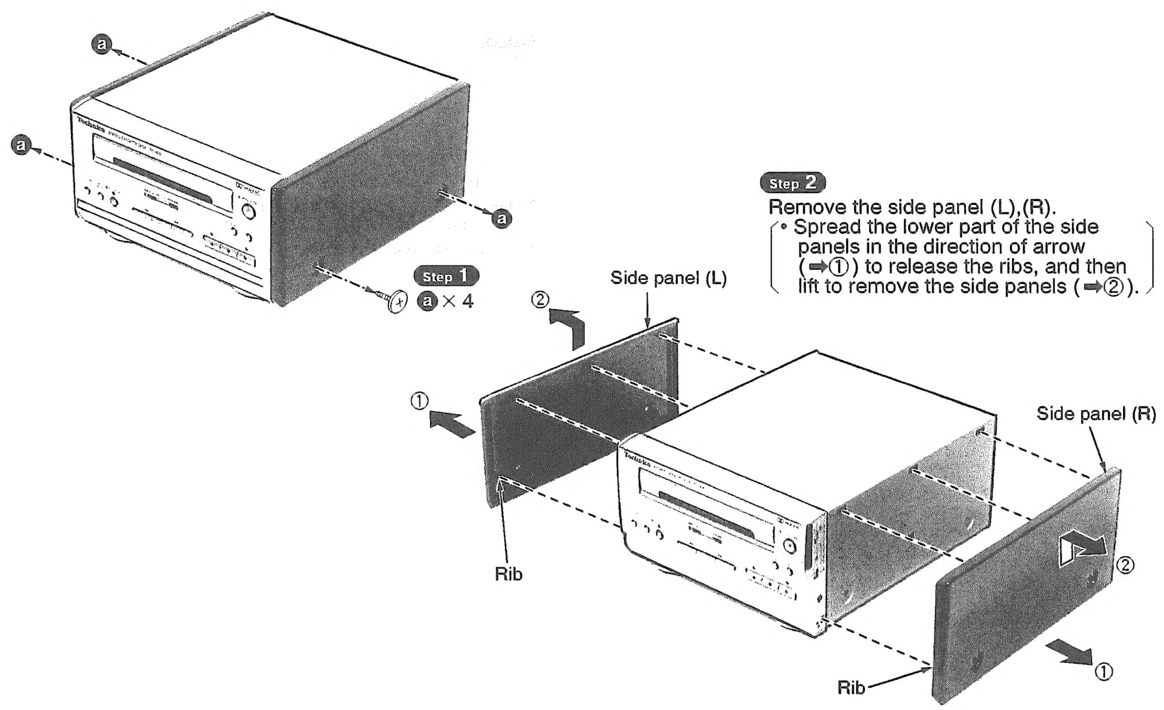
1. Checking for the operation P.C.B.. .... 4,5.
2. Checking for the main P.C.B.. .... 5.

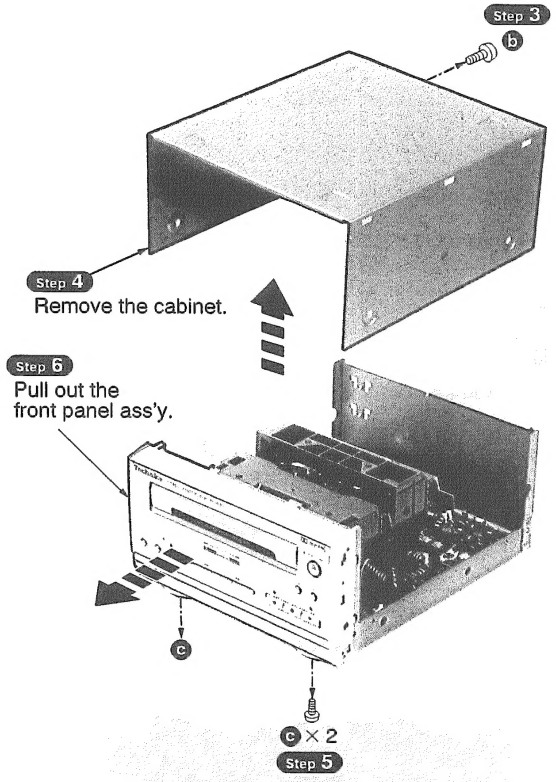
• Main Component Replacement Procedures

1. Replacement for the cassette holder ass'y. .... 6~8.
2. Replacement for the belt, reel motor ass'y and capstan motor ass'y. .... 8~10.
3. Replacement for the parts mounted on mechanism P.C.B.. .... 10.
4. Replacement for the head block and pinch roller ass'y. .... 10.

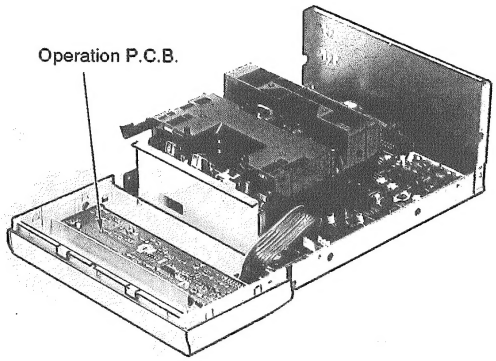
Checking Procedure for each P.C.B.

1. Checking for the operation P.C.B.



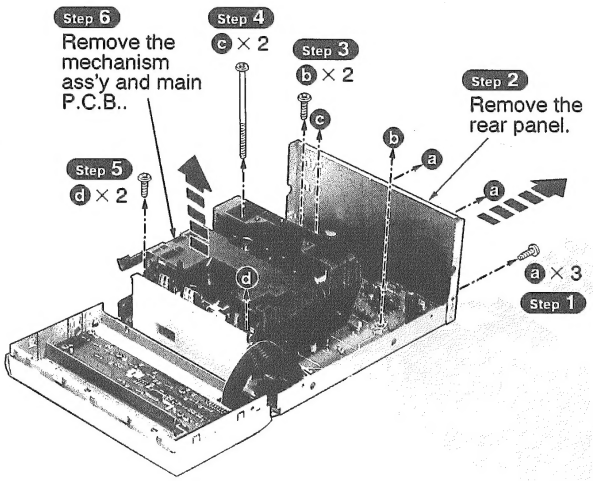


• **Check the operation P.C.B. as shown below.**

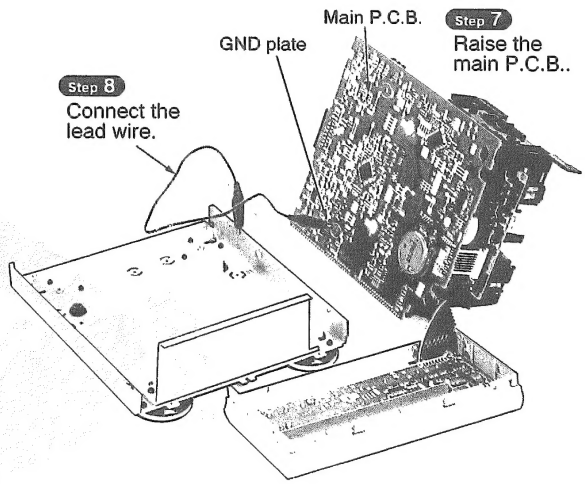


2. Checking for the main P.C.B.

• Follow the item 1 (Step 1 ~ Step 6) in checking procedures for each P.C.B. on pages 4 and 5.



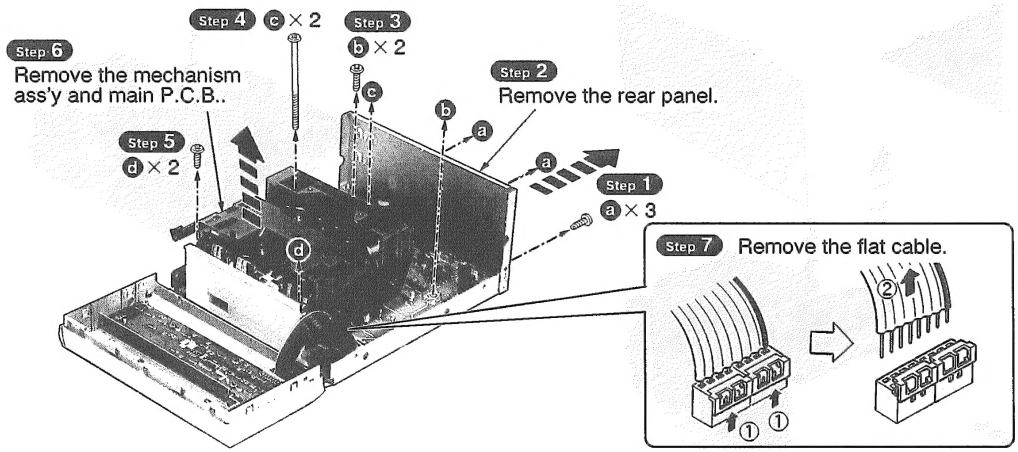
• **Check the main P.C.B. as shown below.**

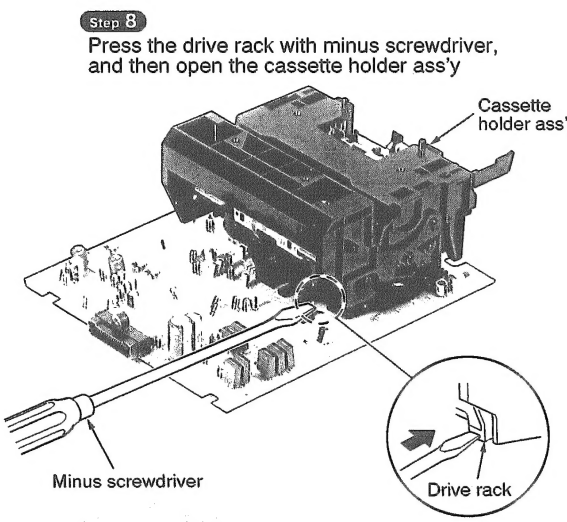


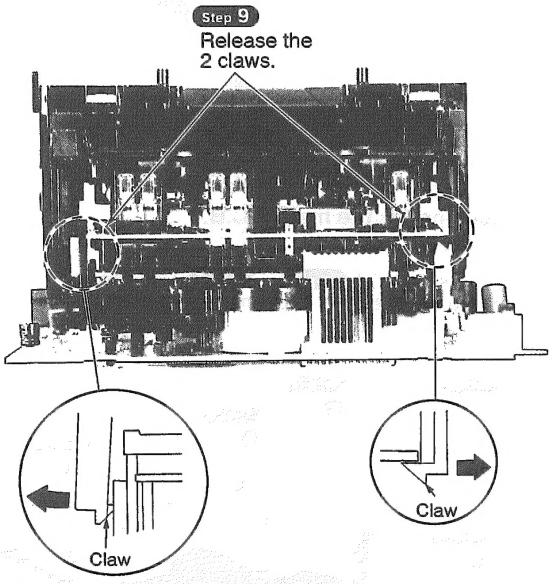
■ Main Component Replacement Procedures

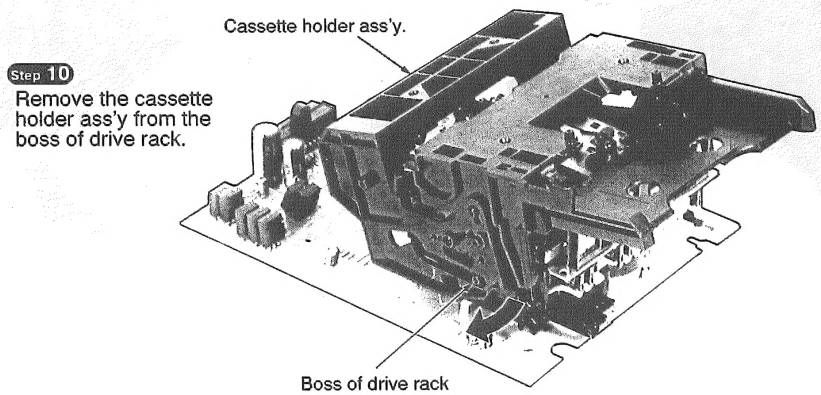
1. Replacement for the cassette holder ass'y

• Follow the item 1 (Step 1 ~ Step 6) in checking procedures for each P.C.B. on pages 4 and 5.



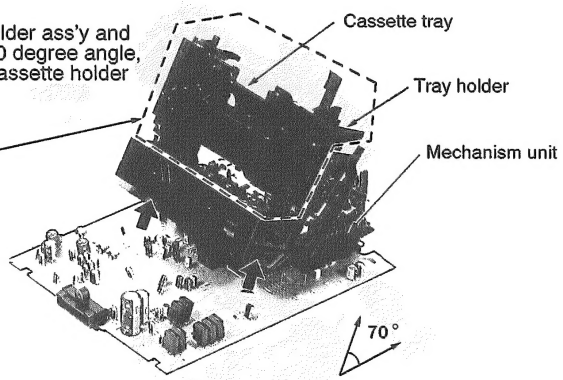


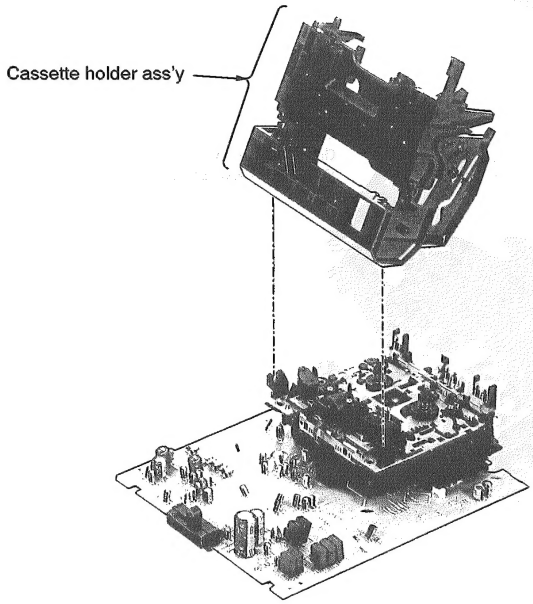




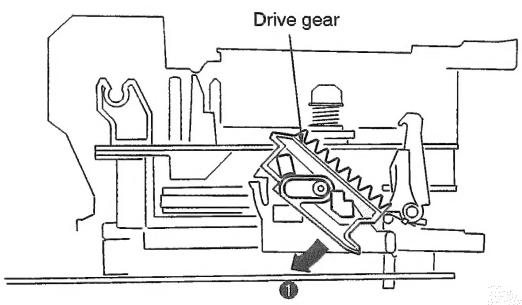
Step 11
Locate the cassette holder ass'y and mechanism unit at a 70 degree angle, and then pull out the cassette holder ass'y.

NOTE
When removing the cassette holder ass'y, avoid to pull it with holding cassette tray or tray holder.

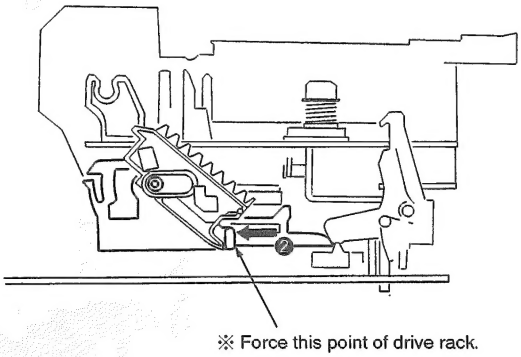




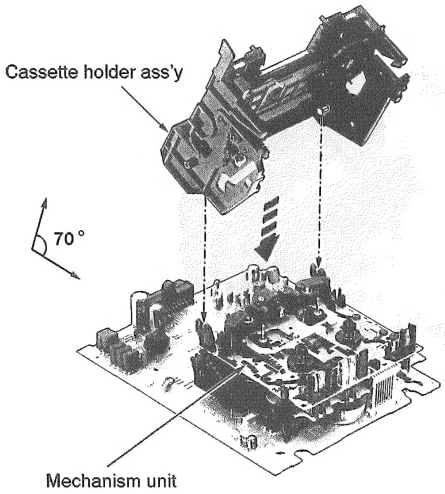
Installation of the cassette holder ass'y after replacement



Step 1
Tilt the drive gear in the direction of arrow ❶.

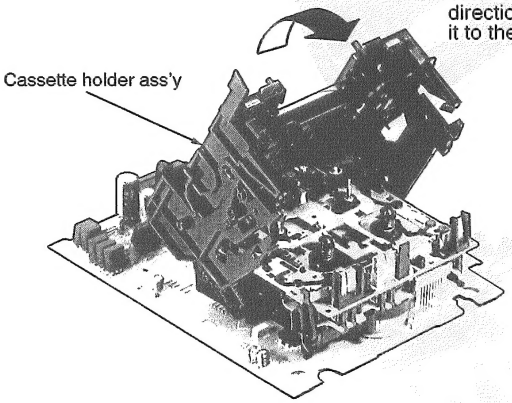


Step 2
Force the drive rack fully in the direction of arrow ❷.



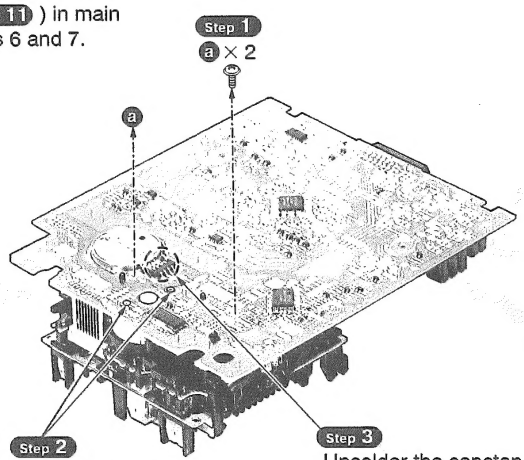
Step 3
Locate the cassette holder ass'y and mechanism unit at a 70 degree angle, and then install the cassette holder ass'y.

Step 4
Tilt the cassette holder ass'y in the direction of arrow, and then secure it to the mechanism ass'y.



2. Replacement for the belt, reel motor ass'y and capstan motor ass'y

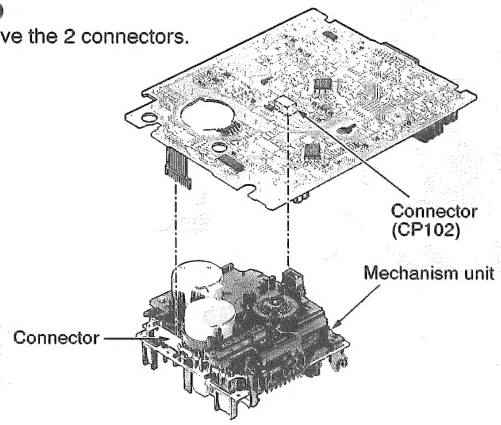
- Follow the item 1 (Step 1 ~ Step 6) in checking procedures for each P.C.B. on pages 4 and 5.
- Follow the item 1 (Step 1 ~ Step 11) in main component procedures on pages 6 and 7.



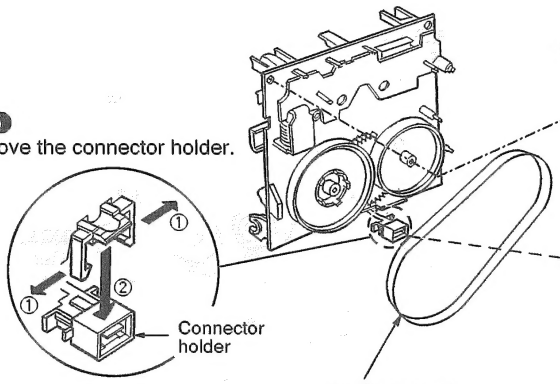
Step 2
Unsolder the reel motor terminals (2 points)

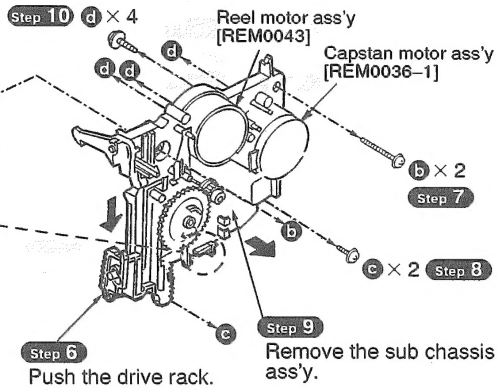
Step 3
Unsolder the capstan motor terminals (4 points)

Step 4
Remove the 2 connectors.



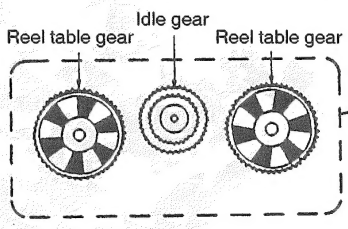
Step 5
Remove the connector holder.



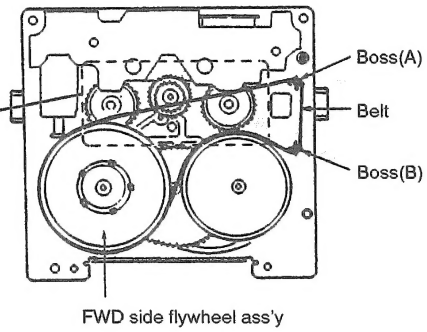


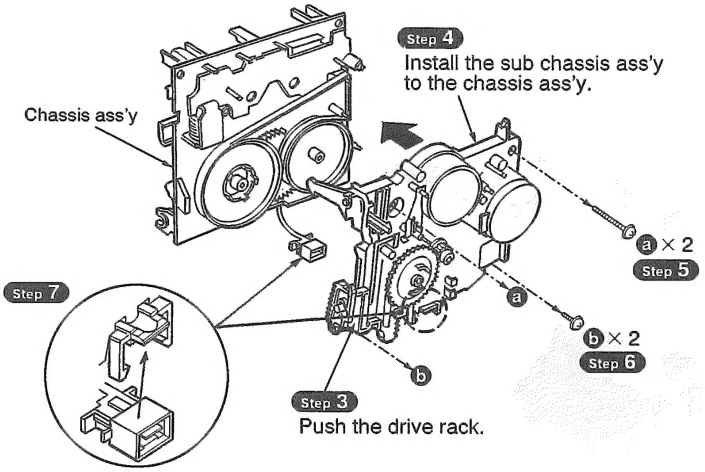
Installation of the sub chassis ass'y after replacement

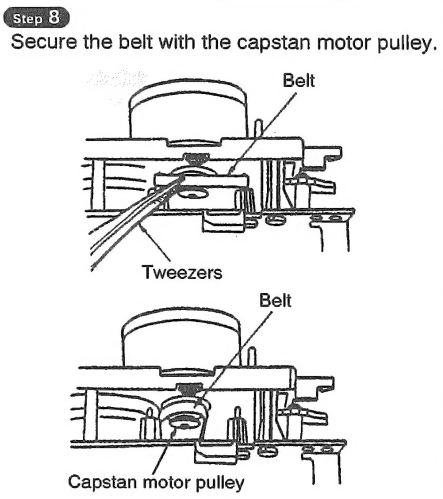
Step 1
Place the idle gear in the center.



Step 2
Temporarily secure the belt.

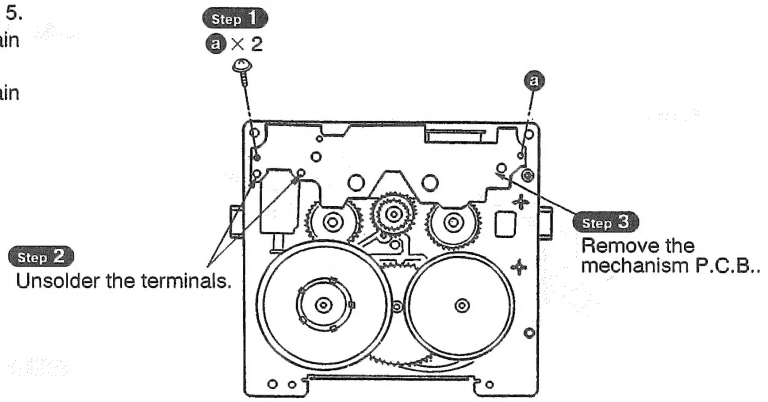






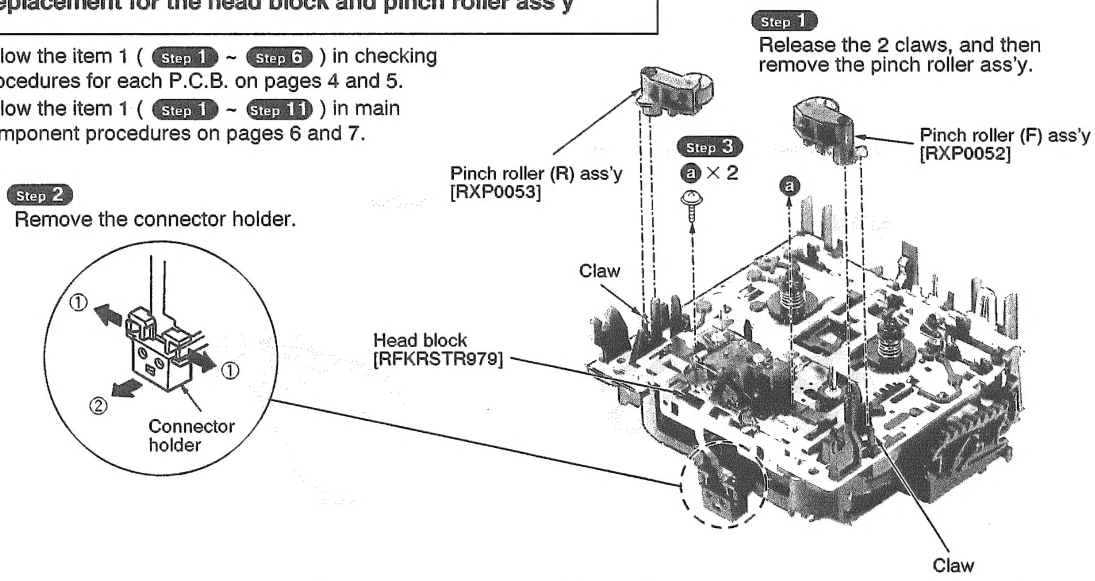
3. Replacement for the parts mounted on mechanism P.C.B.

- Follow the item 1 (Step 1 ~ Step 6) in checking procedures for each P.C.B. on pages 4 and 5.
- Follow the item 1 (Step 1 ~ Step 11) in main component procedures on pages 6 and 7.
- Follow the item 2 (Step 1 ~ Step 9) in main component procedures on pages 8 and 9.



4. Replacement for the head block and pinch roller ass'y

- Follow the item 1 (Step 1 ~ Step 6) in checking procedures for each P.C.B. on pages 4 and 5.
- Follow the item 1 (Step 1 ~ Step 11) in main component procedures on pages 6 and 7.

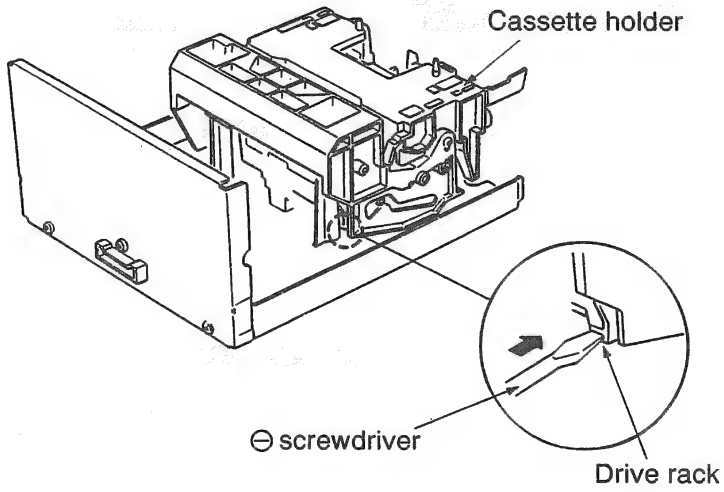


• Manually opening and closing the cassette holder assembly

• Follow the item 1 (Step 1 ~ Step 5) in checking procedures for each P.C.B. on pages 4 and 5.

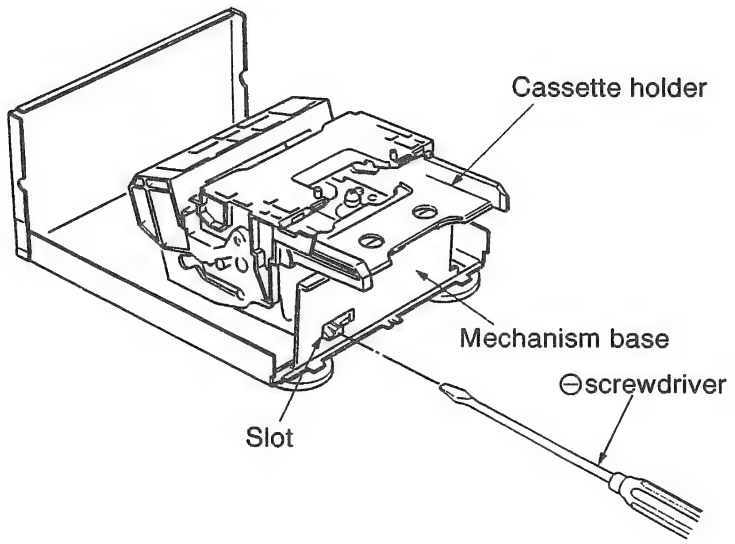
OPENING

Push the drive rack in the direction of the arrow with a ⊖screwdriver.



CLOSING

Push the drive rack back into position by inserting a ⊖screwdriver into the holes on the P.C.B.



■ Measurements and Adjustments

This unit RS-HD81 is designed to operate on power supplied from the Amplifier (SE-HD51 or SE-HD81) through Tuner (ST-HD51 or ST-HD81).
When connecting the unit to other system components, do not connect to the Amplifier (SE-HD81) directly. Be sure to connect this unit through the Tuner (ST-HD51 or ST-HD81).
When operating the unit RS-HD81 alone for testing and servicing, without having power supplied from the Amplifier (SE-HD51 or SE-HD81) and Tuner (ST-HD51 or ST-HD81), use the following method.

● To Supply Power Source

1. Short three sections the test points TP602, A. GND, and TP702.
2. Apply 11 AC power to test points between TP601 and TP602 (GND), and TP603 and TP602 (GND).
   Note: When operated alone, this unit automatically enter the TEST mode, causing indicators to blink.

● To Check Signals

Connect an oscilloscope or a built-in amplifier speaker between line output for Lch (TP201) and jumper (J118) A. GND, and line out for Rch (TP202) and jumper (J118) A. GND and check if the signals are outputting from this unit.

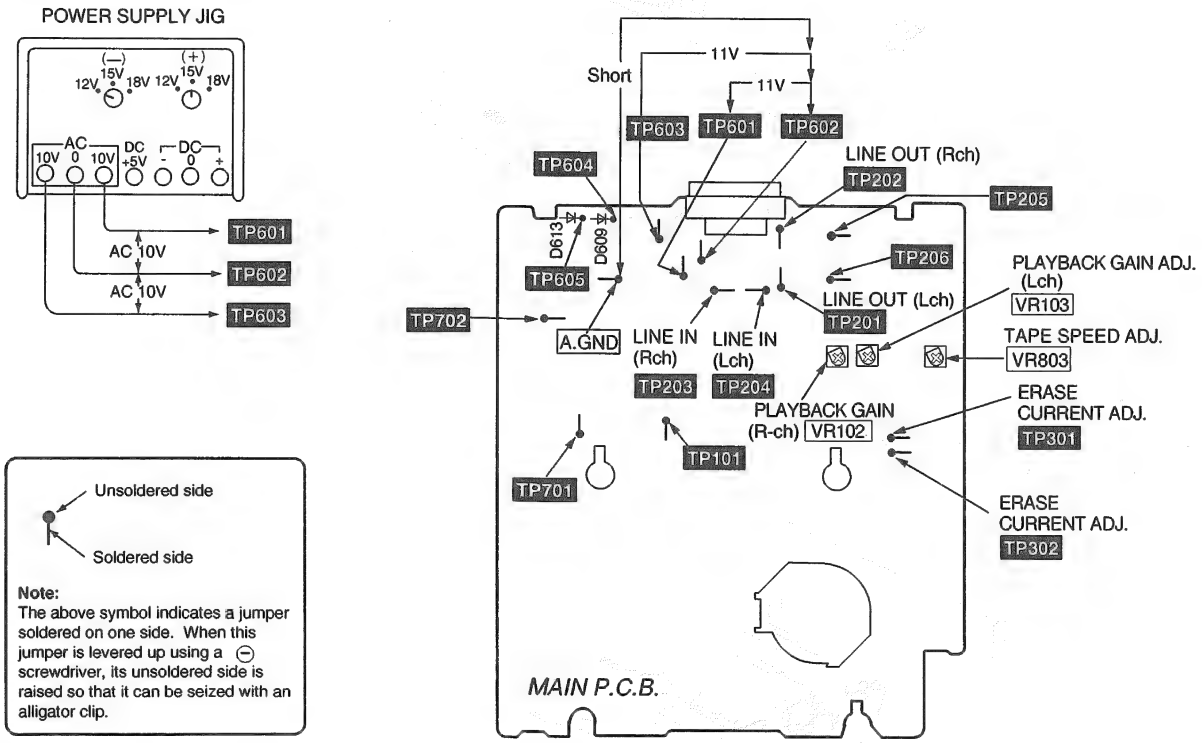


Fig. 1

Measurement Condition
- Dolby NR switch; OFF
- Make sure heads are clean.
- Make sure capstan and pressure roller are clean.
- Judgeable room temperature 20 ± 5°C (68± 9°F)

Measuring Instrument
- EVM (Electronic Voltmeter)
- AF oscillator
- Digital frequency counter

Test Tape
- Head azimuth adjustment (8kHz, –20dB); QZZCFM
- Tape speed adjustment (3kHz, –10dB); QZZCWAT
- Recording/ playback frequency response adjustment; QZZCFM (315Hz/0dB, 315Hz/–20dB, 12.5kHz~63Hz/–20dB)
  Normal blank tape
  CrO2 blank tape
  Metal blank tape

HEAD AZIMUTH ADJUSTMENT

1. Connect the measuring instrument as shown in Fig. 2.
2. Replace azumuth screws for both forward and reverse direction after removing the screw-locking bond left on the head base.
   Fine adjustment of azimuth can not be performed with remaining the bond on the head base.
   (Supply part No. of azimath adjusting screw: **RHD17015**)
3. Playback the azimuth adjustment portion (8kHz, –20dB) of test tape (QZZCFM). Adjust the azimuth adjusting screw until the outputs of the L/R-ch are maximized. (Refer to Fig. 3.)
   Make sure that the difference in the peak level between the left and right channels does not exceed 0.5dB.
4. Perform the same adjustment in reverse playback mode.

Check of the level difference forward and reverse directions

5. Playback the playback gain adjustment portion (315 Hz, 0dB) of test tape (QZZCFM). Check if level difference between forward and reverse direction is within 1.5 dB.
6. After the adjustment, apply screwlock to the azimuth adjusting screw.

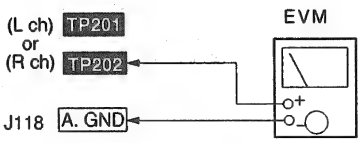


Fig. 2

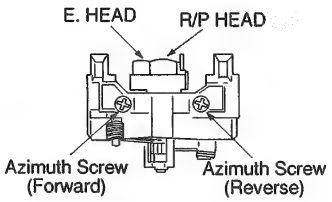


Fig. 3

TAPE SPEED ADJUSTMENT

Note: When connecting the unit to other system components for testing, short the section between the test points TP701 and TP702 and turn on the entire system. (The unit is set to the TEST mode, indicators will blink.)

Normal speed (Standard value: 3000 ± 45Hz)

1. Connect the measuring instrument as shown in Fig. 4.
2. Playback the middle portion of the test tape (QZZCWAT).
3. Adjust **VR803** for the output value shown below. (Refer to Fig. 1)

Adjustment target: 3000 ± 15Hz **Standard value: 3000 ± 45Hz**

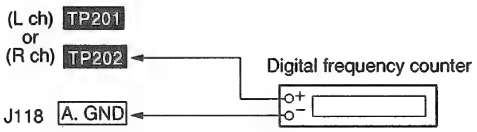


Fig. 4

Note: When connecting the unit to other system components, disconnect the short between the test points TP701 and TP702.

PLAYBACK GAIN ADJUSTMENT

1. Connect the measuring instrument as shown in Fig. 5.
2. Find the start of the 315Hz/0dB section of the test tape (QZZCFM), insert the tape, and play it back (FWD).
3. Adjust **VR103** (Lch) **[VR102** (Rch)] so that the output is within the standard value. (Refer to Fig. 1).

Standard value: 265mV ± 300mV

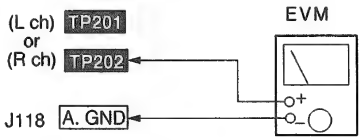


Fig. 5

ERASE CURRENT CONFIRMATION

1. Connect the measuring instrument as shown in Fig. 6.
2. Insert the blank tape, and press the REC PAUSE button.
3. Check if the output at this time between the erase current confirmation point TP301 and TP302 (the output on both edged of R313) is within the standard value.

Standard value	**EVM reading**
Normal tape : 75 ± 25 mA	**(75 ± 25 mA)**
CrO_2 tape : 110 ± 25 mA	**(110 ± 25 mA)**
Metal tape : 180 ± 25 mA	**(180 ± 25 mA)**

Note: The test tape is not required when confirming the erase current.

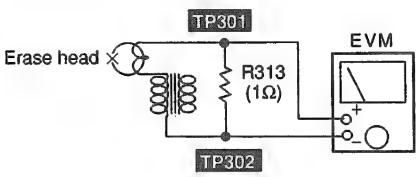


Fig. 6

Playback frequency response check

1. Connect the measuring instrument as shown in Fig. 7
2. Playback the 315Hz/–20dB and 12.5 kHz to 63 Hz/–20dB sections of the test tape (QZZCFM) and then, using the 315 Hz/–20dB playback output as a reference (0 dB), confirm that the playback frequency response is within the range shown in Fig. 8.

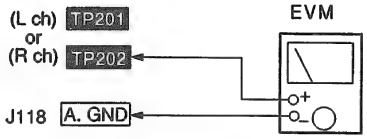


Fig. 7

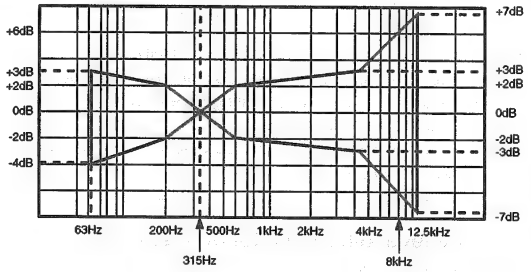


Fig. 8

Recordnig/playback frequency response and gain check

Normal tape check

1. Connect the measuring instrument as shown in Fig. 9.
2. Insert a Normal-type blank tape.
3. Record signals at 50 Hz, 100Hz, 200 Hz, 500 Hz, 1kHz, 2kHz, 10kHz and 12.5 kHz (28mV).
4. Set the playback frequency of the recorded signals at 1kHz as the reference response (0 dB).
5. Playback the recorded signals to confirm that the output is within the range of the overall frequency response shown in Fig. 10.

CrO2/ Metal tape check

6. Repeat steps 3 to 5 for each tape and confirm that the output for each is within the range of the overall frequency response shown in Fig. 11.

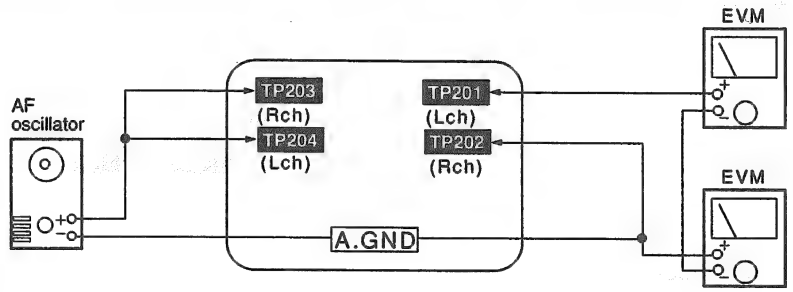


Fig. 9

Normal Overall frequency response chart (NR OUT)

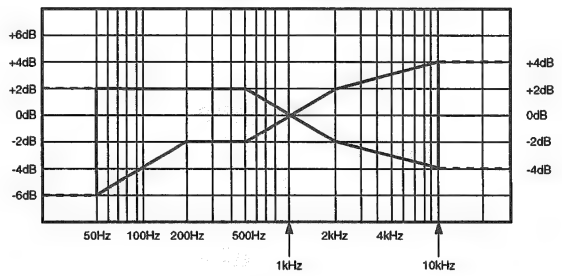


Fig. 10

CrO2/ Metal Overall frequency response dhart (NR OUT)

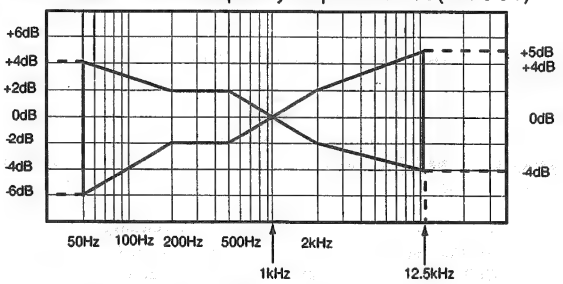
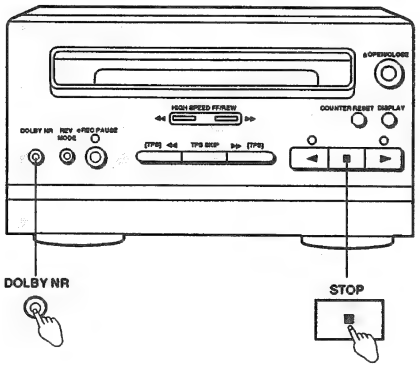


Fig. 11

■ Service Mode Function of Cassette Mechanism

This unit is equipped with a service mode function of cassette mechanism using the LED indicators [R. PLAY (◀), F. PLAY (▶), REW (◀◀), FF(▶▶)]. Use this function during maintenance to check faults of the items below.



• Cassette tapes to be prepared

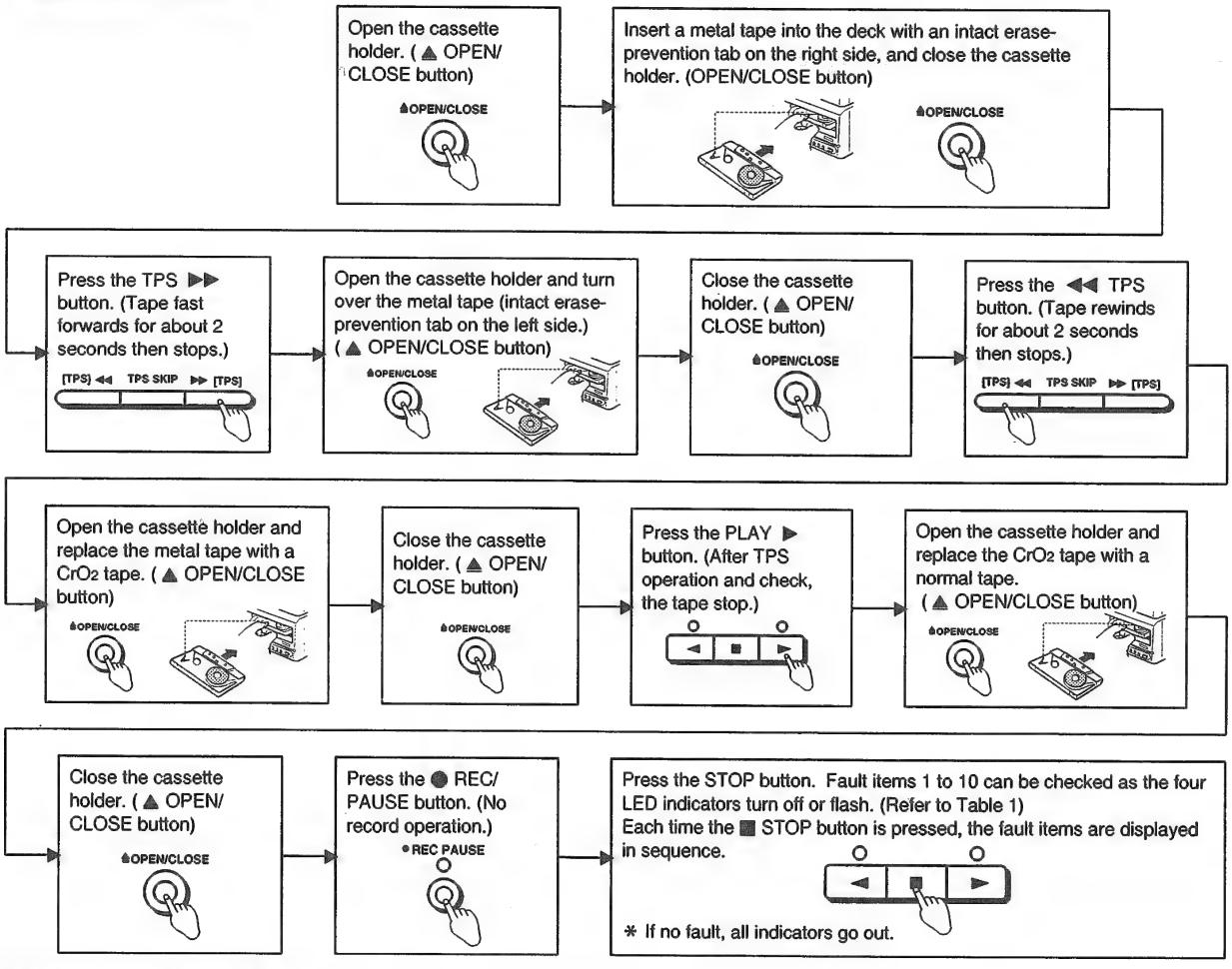
Metal tape: Recorded music tape with only one erase-prevention tab intact (use middle portion of the tape).

Normal tape: / CrO_2 tape: Recorded music tape with both erase-prevention tabs intact (use middle portion of the tape).

• Selecting Service Mode

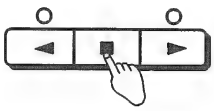
1. Turn on the power to the unit. (If RS-HD81 unit is removed from system, turn it on according to the procedure on page 12.)
2. Check that no tape is inserted in the cassette deck.
   Press the DOLBY NR button for about 2 seconds, and keep pressing it, also press the STOP button for about 2 seconds. (Service mode cannot be selected with a tape inserted in the cassette deck.)
3. The LED indicator for REC PAUSE flashes, the service mode has been activated.

• Mechanism Check



• Exiting-Self-Check Mode

1. Press the ■ STOP button for more than 5 seconds. (Diagnostic contents stored in memory are erased.)
2. Remove the cassette tape from the cassette holder.
3. Turn off the unit.

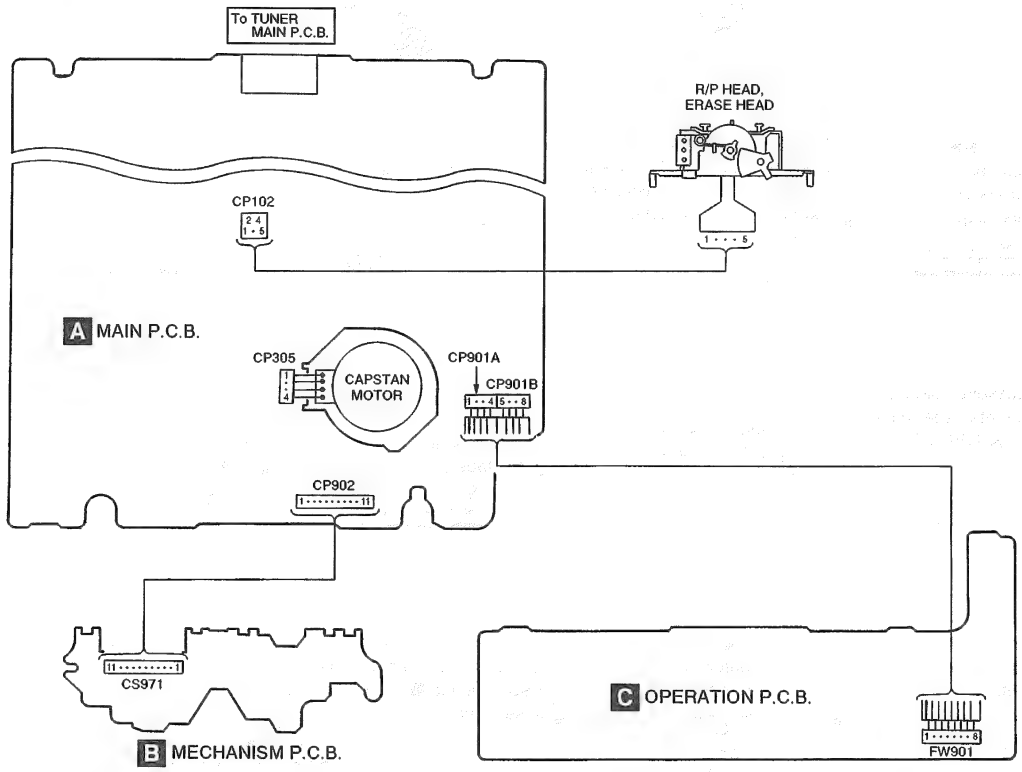


No.	LED indicator status (off/flashing)				Fault location
	◀	▶	◀◀	▶▶	
1.	–	–	–	●	MODE detect switch
2.	–	–	●	–	REC prevention switch
3.	–	–	●	●	Half detect switch
4.	–	●	–	–	Deck OPEN switch
5.	–	●	–	●	Deck CLOSE switch
6.	–	●	●	–	CrO_2 tape detect switch
7.	–	●	●	●	Metal tape detect switch
8.	●	–	–	–	Reel pulse detect system (Hall IC, etc.)
9.	●	–	–	●	TPS operation
10.	●	–	●	–	Reel motor

Notes:
"●": Flashing
"—": off
* If no fault, all indicators go out.

Table 1: Service Mode Diagnostic Items

■ Wiring Connection Diagram



■ Schematic Diagram (Parts list on pages 28 ~ 30.)

- This schematic diagram may be modified at any time with development of new technology.

Page

A MAIN CIRCUIT ..... 18~20
B MECHANISM CIRCUIT 19
C OPERATION CIRCUIT 21

Notes:

- **S803**: Cassette holder open detection switch in "off" position.
- **S804**: Cassette holder close detection switch in "off" position.
- **S900**: Stop (■) switch.
- **S901**: Dolby noise-reduction switch (DOLBY NR).
- **S902**: Rewind tape program sensor switch (◀◀ [TPS]).
- **S903**: Reverse-side playback switch (◀).
- **S904**: TPS skip switch (TPS SKIP).
- **S905**: Forward-side playback switch (▶).
- **S906**: Fast forward tape program sensor switch (▶▶ [TPS]).
- **S909**: Rec pause switch (● REC PAUSE).
- **S910**: Cassette holder open/ close switch (▲ OPEN/ CLOSE).
- **S911**: Counter display switch (DISPLAY).
- **S912**: Counter reset switch (RESET).
- **S915**: Reverse-mode select switch (REV. MODE).
- **S971**: Mode switch in "off" position.
- **S972**: Half switch in "off" position.
- **S973**: ATS (CrO_2) switch in "off" position.
- **S974**: Reverse rec. inhibit switch in "off" position.
- **S975**: Forward rec. inhibit switch in "off" position.
- **S976**: ATS (Metal) switch in "off" position.

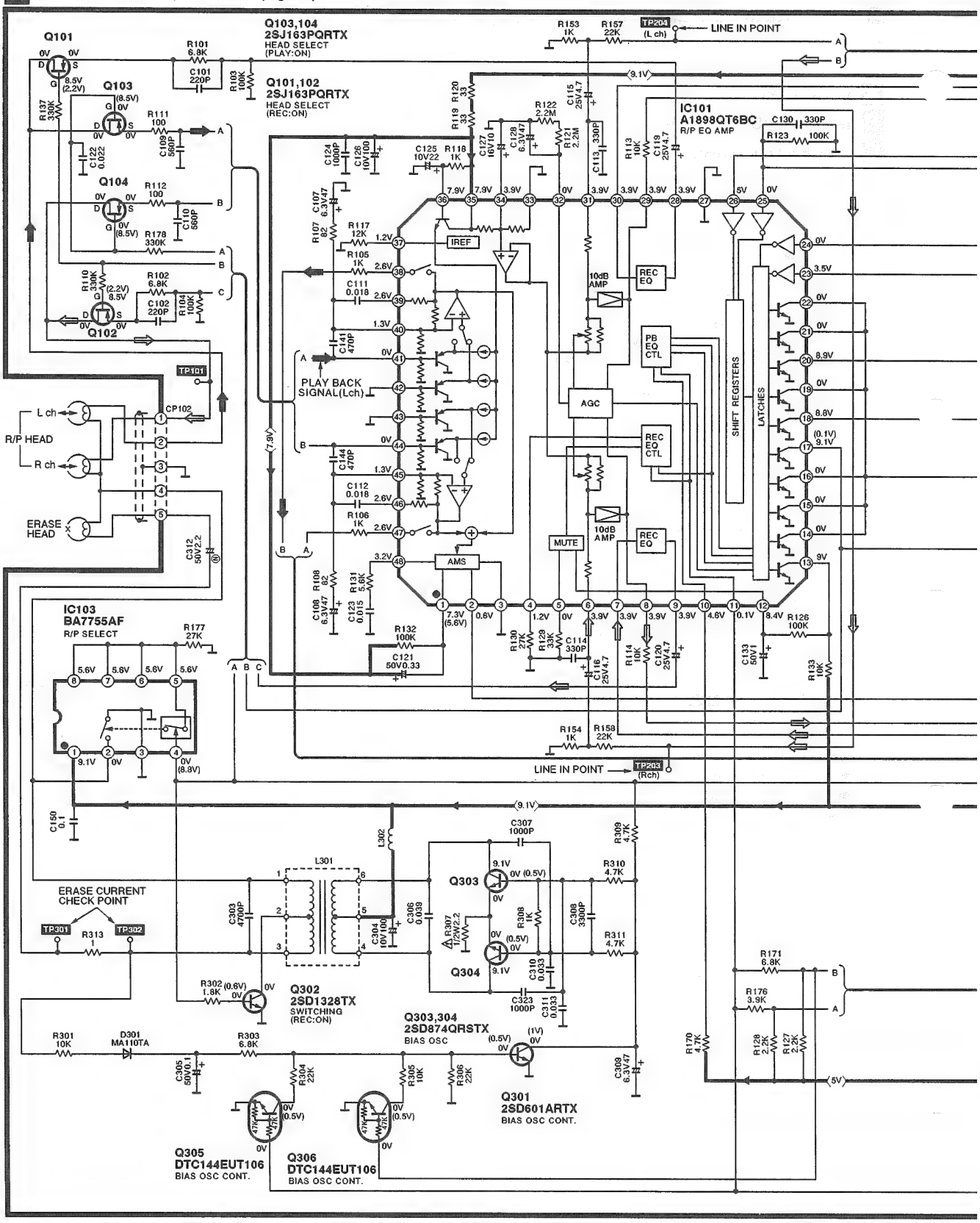
- Resistance are in ohms (Ω), 1/4 watt unless specified otherwise.
  1K=1,000 (Ω), 1M=1,000 (Ω)
- Capacity are in micro-farads (μF) unless specified otherwise.
- All voltage values shown in circuitry are under no signal condition and playback mode with volume control at minimum position otherwise specified.
  ( )..... Voltage values at record mode.
  For measurement us EVM.
- Voltage values and waveforms are measured as indicated in the schematic diagram when test points between TP604 and TP605, and between A. GND and TP602 are shorted.
- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety.
  When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.
- : Positive voltage line
  : Negative voltage line
  : Playback signal line
  : Recording signal line

● Caution!

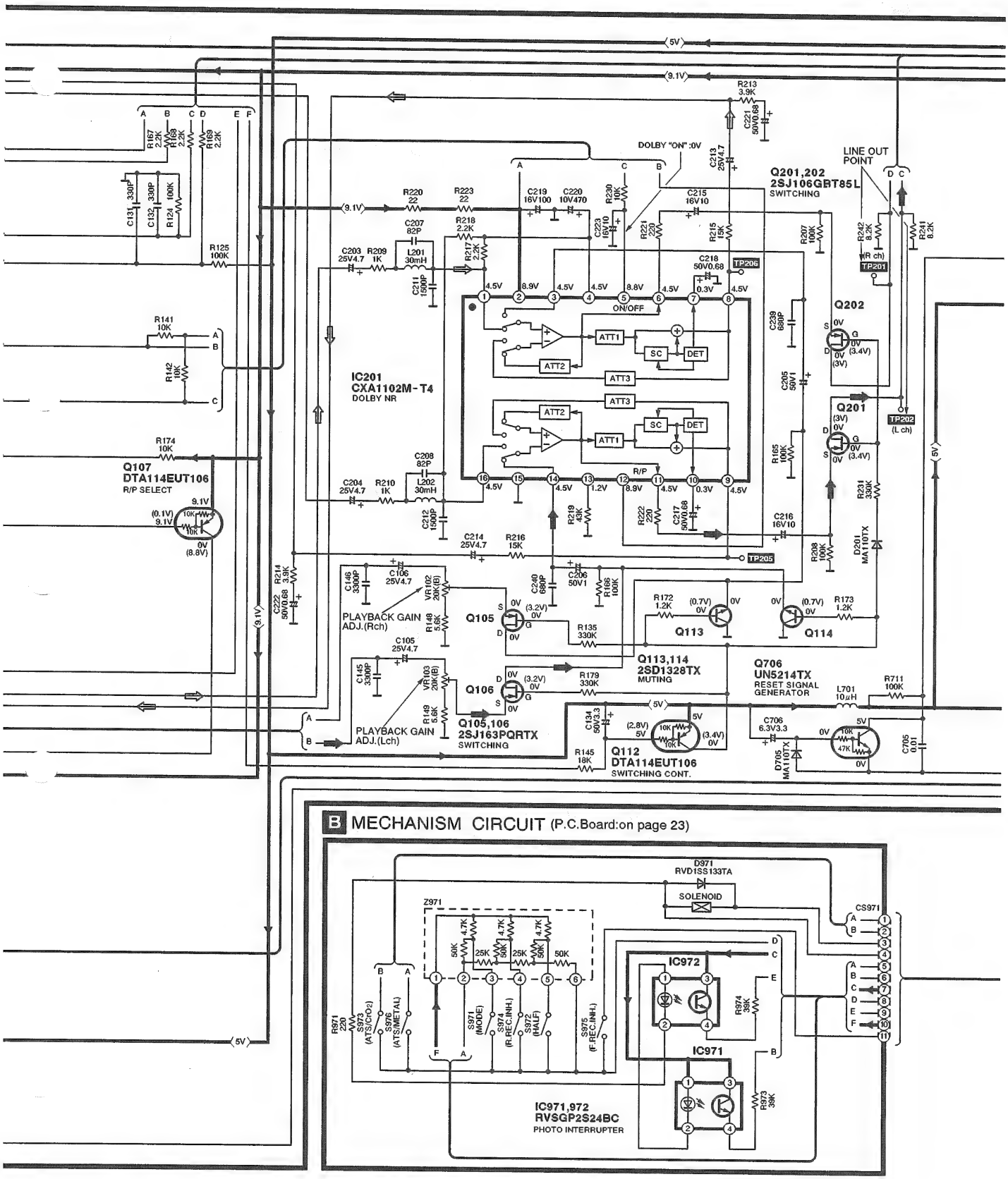
IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.

- Cover the parts boxes made of plastics with aluminum foil.
- Ground the soldering iron.
- Put a conductive mat on the work table.
- Do not touch the legs of IC or LSI with the fingers directly.

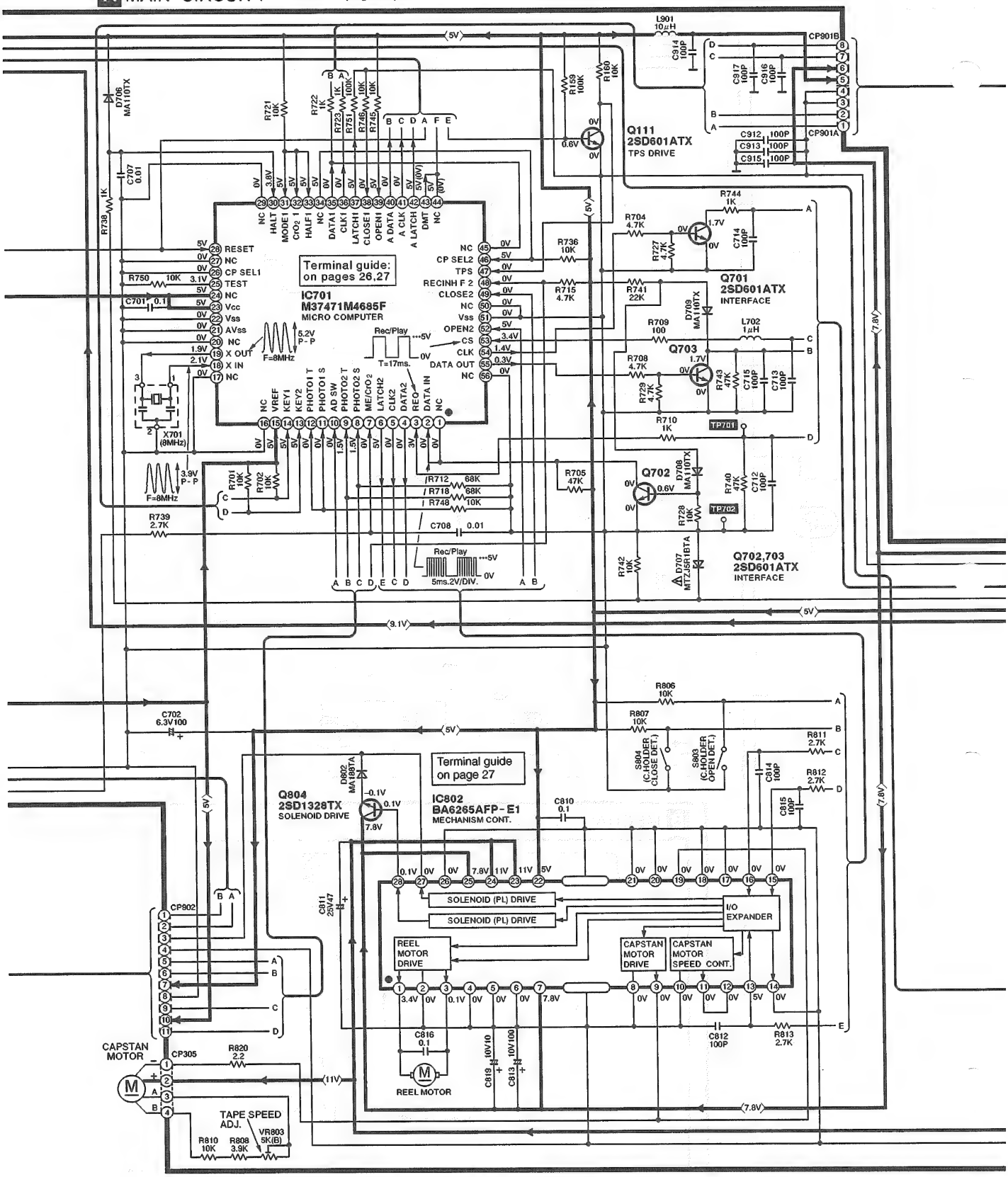
A MAIN CIRCUIT (P.C.Board:on page 22)



Note • ⇨: Recording signal • ➡: Playback signal

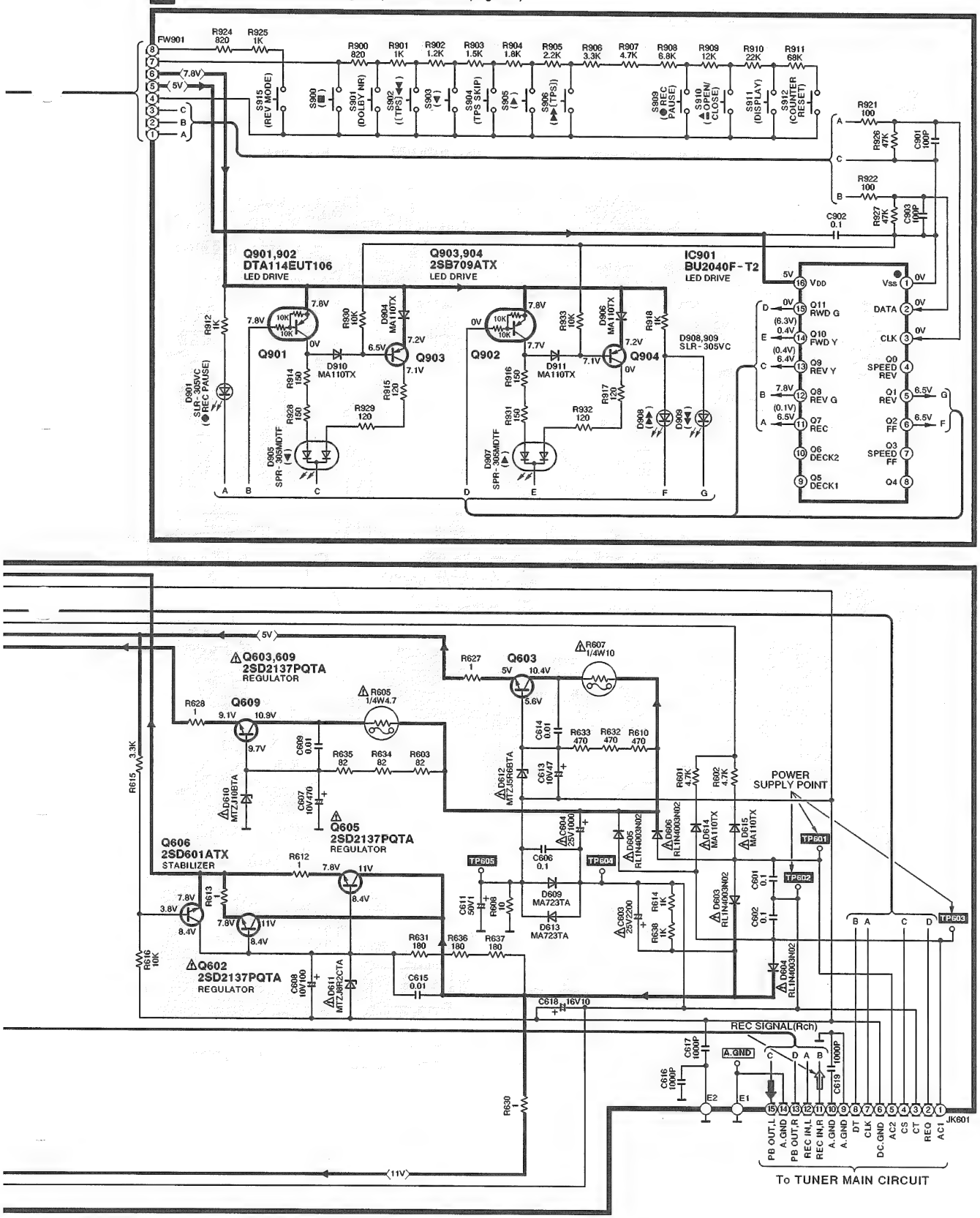


A MAIN CIRCUIT (P.C.Board:on page 22)



Note ● ⇨: Recording signal ● ➡: Playback signal

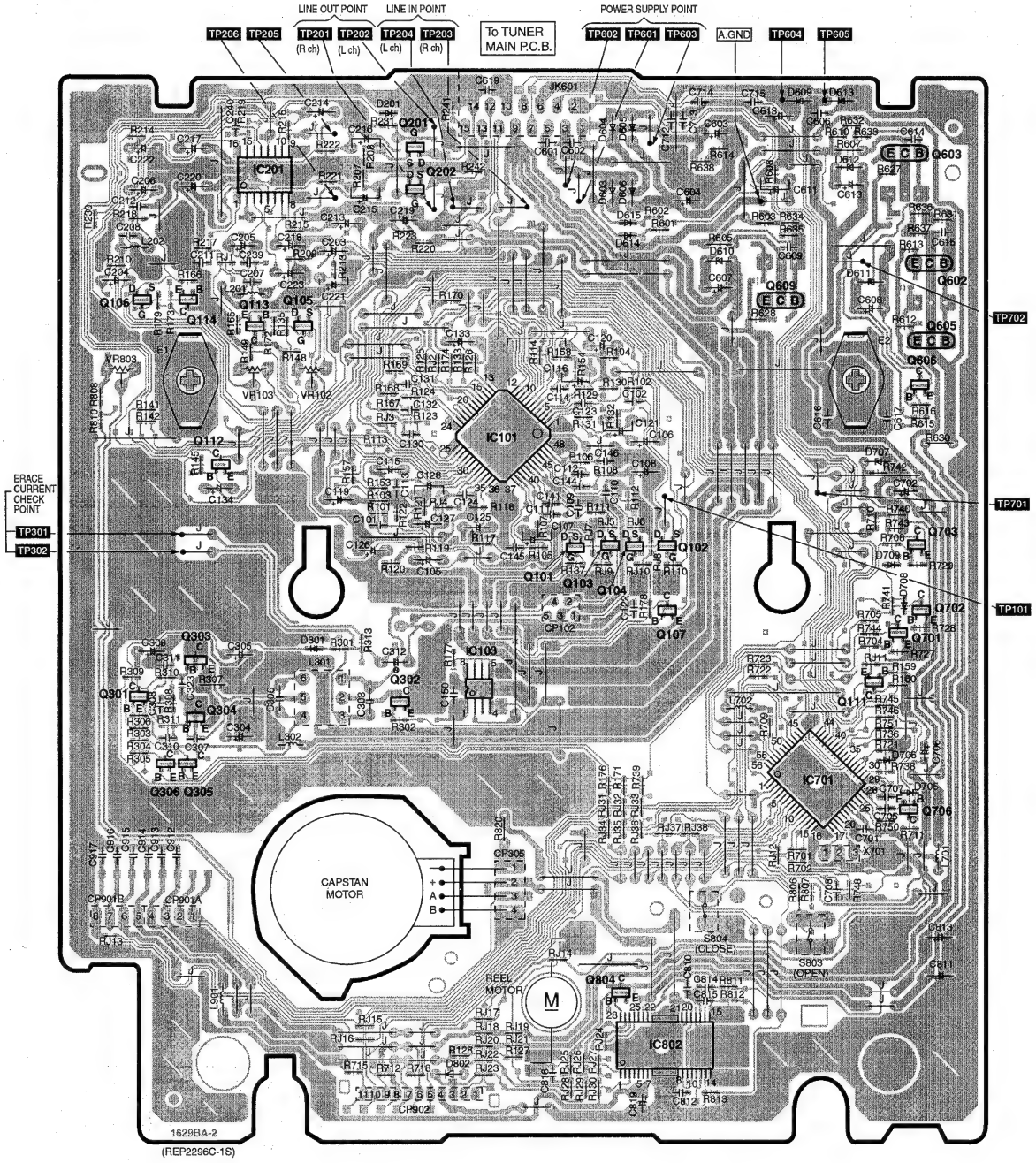
C OPERATION CIRCUIT (P.C.Board:on page 23)



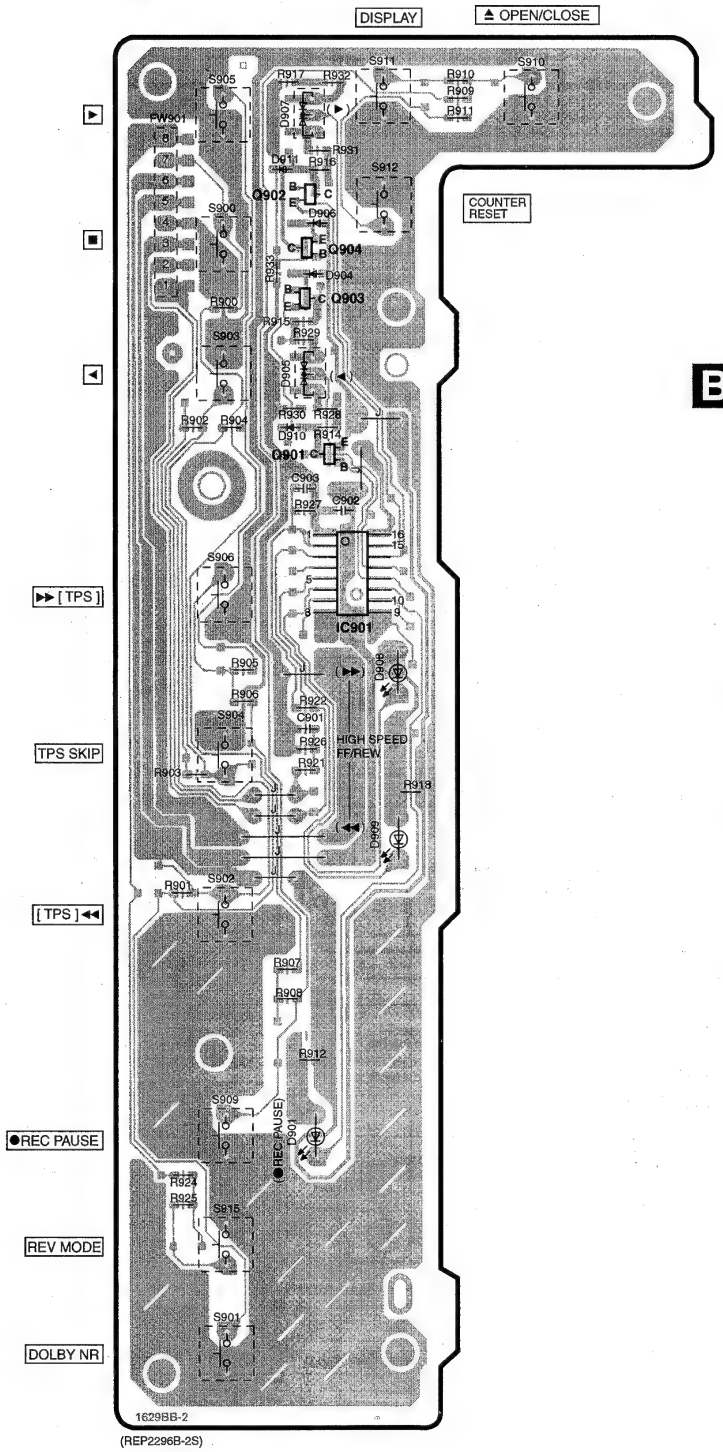
Printed Circuit Board Diagram

(This printed circuit board diagram may be modified at any time with the development of new technology.)

A MAIN P.C.B.

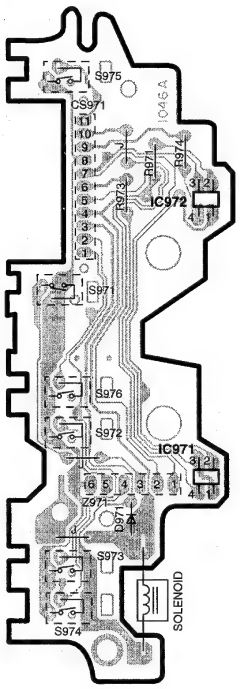


C OPERATION P.C.B.

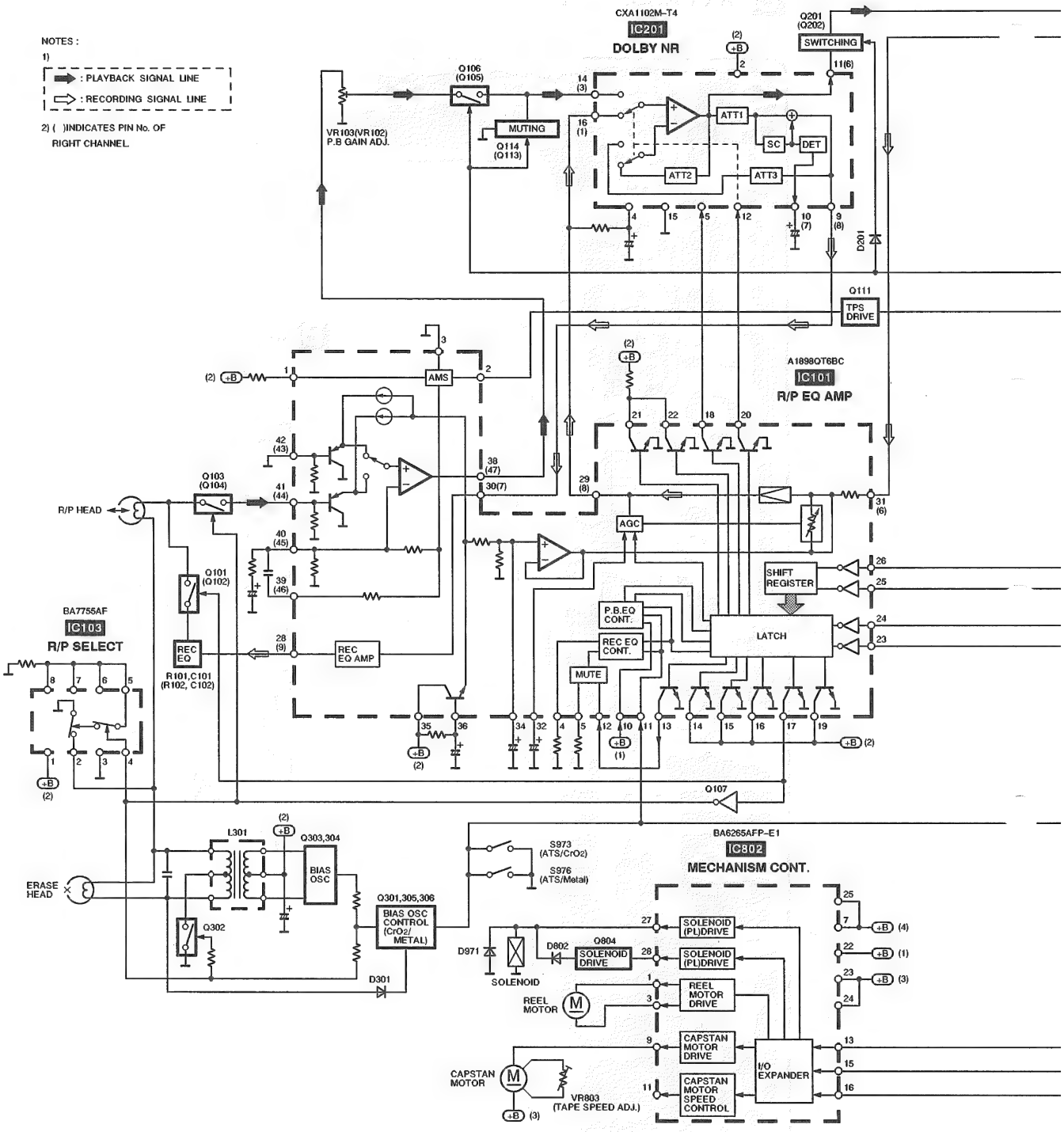


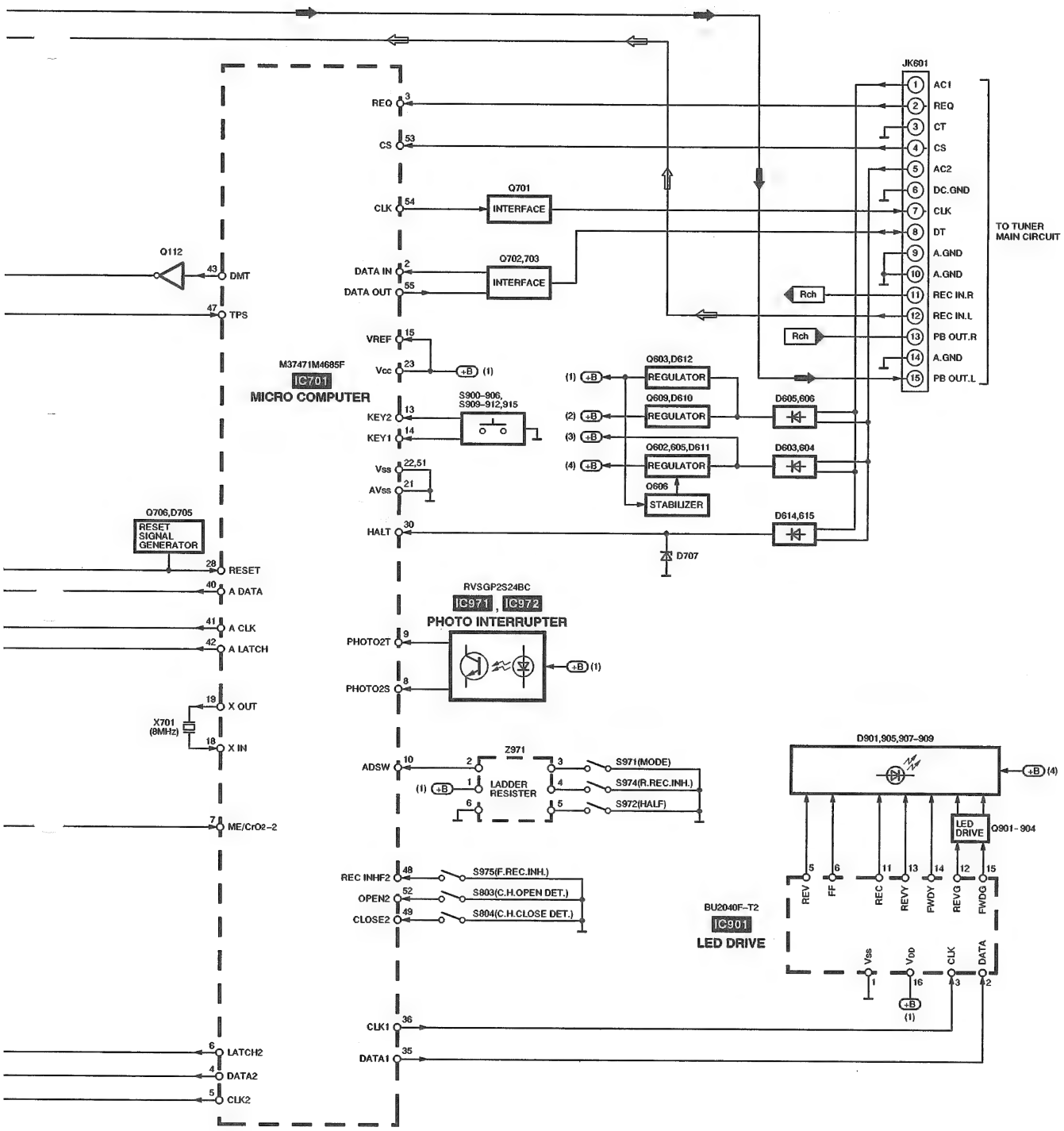
(REP2296B-2S)

B MECHANISM P.C.B.



(REP1656A)


NOTES :
1)
: PLAYBACK SIGNAL LINE
: RECORDING SIGNAL LINE
2) ( )INDICATES PIN No. OF RIGHT CHANNEL.
CXA1102M-T4
IC201
DOLBY NR
Q201 (Q202)
SWITCHING
Q106 (Q105)
MUTING
Q114 (Q113)
VR103(VR102) P.B GAIN ADJ.
ATT1
ATT2
ATT3
SC
DET
D201
Q111
TPS DRIVE
A1898QT6BC
IC101
R/P EQ AMP
AMS
AGC
SHIFT REGISTER
LATCH
P.B.EQ CONT.
REC EQ CONT.
MUTE
REC EQ AMP
Q103 (Q104)
Q101 (Q102)
R/P HEAD
BA7755AF
IC103
R/P SELECT
REC EQ
R101,C101 (R102, C102)
Q107
L301
Q303,304
BIAS OSC
ERASE HEAD
Q302
Q301,305,306
BIAS OSC CONTROL (CrO2/ METAL)
D301
S973 (ATS/CrO2)
S976 (ATS/Metal)
BA6265AFP-E1
IC802
MECHANISM CONT.
SOLENOID (PL)DRIVE
SOLENOID DRIVE
D971
D802
Q804
SOLENOID
REEL MOTOR
REEL MOTOR DRIVE
CAPSTAN MOTOR
CAPSTAN MOTOR DRIVE
CAPSTAN MOTOR SPEED CONTROL
VR803 (TAPE SPEED ADJ.)
I/O EXPANDER


JK601
AC1
REQ
CT
CS
AC2
DC.GND
CLK
DT
A.GND
A.GND
REC IN.R
REC IN.L
PB OUT.R
A.GND
PB OUT.L
TO TUNER MAIN CIRCUIT
Rch
Rch
REQ
CS
CLK
Q701
INTERFACE
DATA IN
DATA OUT
Q702,703
INTERFACE
Q112
DMT
TPS
VREF
Vcc
M37471M4685F
IC701
MICRO COMPUTER
KEY2
KEY1
S900-906, S909-912,915
Vss
AVss
HALT
Q603,D612
REGULATOR
Q609,D610
REGULATOR
Q602,605,D611
REGULATOR
Q606
STABILIZER
D605,606
D603,604
D614,615
D707
Q706,D705
RESET SIGNAL GENERATOR
RESET
A DATA
A CLK
A LATCH
X OUT
X IN
X701 (8MHz)
ME/CrO2-2
RVSGP2S24BC
IC971 , IC972
PHOTO INTERRUPTER
PHOTO2T
PHOTO2S
ADSW
Z971
LADDER RESISTER
S971(MODE)
S974(R.REC.INH.)
S972(HALF)
REC INHF2
OPEN2
CLOSE2
S975(F.REC.INH.)
S803(C.H.OPEN DET.)
S804(C.H.CLOSE DET.)
D901,905,907-909
LED DRIVE
Q901 - 904
REV
FF
REC
REVY
FWDY
REVG
FWDG
BU2040F-T2
IC901
LED DRIVE
Vss
VDD
CLK
DATA
CLK1
DATA1
LATCH2
DATA2
CLK2

■ Terminal Function of IC's

● IC701 (M37471M4685F): MICRO COMPUTER

Pin No.	Mark	I/O	Function
1	NC	–	Not used
2	DATA IN	I	Serial data input
3	REQ	I	Request signal input
4	DATA2	O	Mechanism control data output
5	CLK2	O	Mechanism control clock output
6	LATCH2	O	Mechanism control latch signal output
7	ME/CrO2-2	I	Tape select switch input
8	PHOTO2_S	I	Reverse side reel pulse input
9	PHOTO2_T	I	Forward side reel pulse input
10	AD_SW	I	Mechanism switch signal input
11	PHOTO1_S	I	Reverse side reel pulse input
12	PHOTO1_T	I	Forward side reel pulse input
13	KEY2	I	Key switch signal input
14	KEY1	I	
15	VREF	I	Reference voltage input
16	NC	–	Not used
17	NC	–	Not used
18	XIN	I	Clock input
19	XOUT	O	Clock output
20	NC	–	Not used
21	AVSS	–	Connect to GND
22	VSS	–	Connect to GND
23	VCC	–	Power supply (+5V)
24	NC	–	Not used
25	TEST	I	Test mode select (Not used)
26	CP_SEL1	–	Not used
27	NC	–	Not used
28	RESET	I	Reset signal input

Pin No.	Mark	I/O	Function
29	NC	–	Not used
30	HALT	I	AC power source detect signal input
31	MODE1	I	Mode detect switch signal input
32	CrO2-1	I	Tape select switch signal input
33	HALF1	I	Half detect switch signal input
34	NC	–	Not used
35	DATA1	O	Control data output
36	CLK1	O	Control clock output
37	LATCH1	O	Mechanism control latch signal output
38	CLOSE1	I	Cassette holder close detect switch signal input
39	OPEN1	I	Cassette holder open detect switch signal input
40	A DATA	O	Serial data output
41	A CLK	O	Serial clock output
42	A LATCH	O	Latch signal output
43	DMT	O	Muting control signal output
44	NC	–	Not used
45	NC	–	Not used
46	CP_SEL2	–	Not used
47	TPS	I	TPS signal input
48	RECINH F_2	I	Record prevention tab detect switch signal input
49	CLOSE2	I	Cassette holder close detect switch signal input
50	NC	–	Not used
51	VSS	–	GND terminal
52	OPEN2	I	Cassette holder open detect switch signal input
53	CS	I	Serial data control signal input
54	CLK	O	Serial clock output
55	DATA OUT	O	Serial data output
56	NC	–	Not used

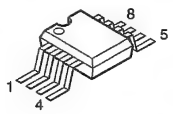
• IC802 (BA6265AFP-E1): MECHANISM CONTROL

Pin No.	Mark	I/O	Function
1	RM(−)	O	Reel motor drive (−) output terminal
2	RNF	–	GND terminal
3	RM(+)	O	Reel motor drive (+) output terminal
4	NC	–	Not used, connected to GND
5	NC		
6	NC		
7	VCC2	I	Power supply terminal
8	CPM GND	–	GND terminal
9	CPM	O	Capstan motor drive output terminal
10	NC	–	Not used, connected to pin11
11	CPM SW	O	Capstan speed select SW output terminal
12	NC	–	Not used, connected to pin 11
13	LATCH	I	I/O expander latch signal input terminal
14	S0	O	I/O expander serial output terminal

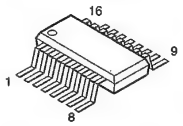
Pin No.	Mark	I/O	Function
15	DATA	I	I/O expander data signal input terminal
16	CLK	I	I/O expander clock signal input terminal
17	NC	–	Not used, connected to GND
18	NC	–	
19	NC	–	Not used, connected to pin 9
20	GND	–	GND terminal
21	GND	–	GND terminal
22	VCC1	I	Power supply terminal
23	VCC3	I	Power supply terminal
24	VCC3	I	Power supply terminal
25	NC	–	Not used, connected to power supply
26	GND	–	GND terminal
27	PL 15V	O	Plunger output terminal(15V)
28	PL 7.5V	O	Plunger output terminal(7.5V)

■ Type Illustrations of IC's Transistors and Diodes

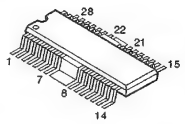
BA7755AF



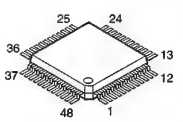
CXA1102M-T4
BU2040F-T2



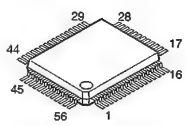
BA6265AFP-E1



A1898QT6BC



M37471M4685F



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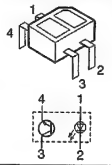

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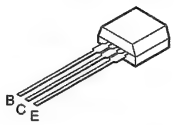

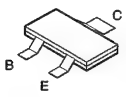

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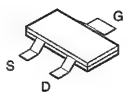
2SJ106GBT85L
2SJ163PQRTX



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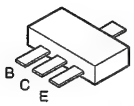

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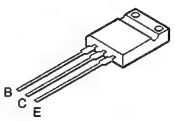

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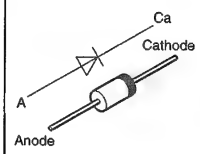

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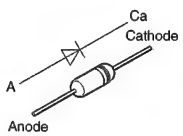

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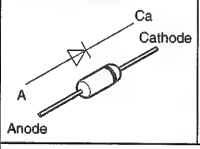

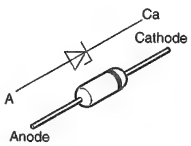

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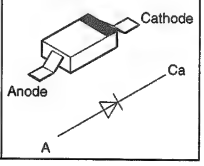
MTZJ5R6BTA
MTZJ8R2CTA

MA110TX



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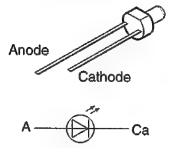
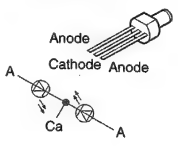


SPR-305MDTF



Replacement Parts List

Notes: * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
* The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.) Parts without these indications can be used for all areas.
* Capacity values are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
* Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000k (OHM)

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	RHD30073-K	SCREW	4	
2	RGK0809-1M	SIDE PANEL(R)	1	
3	XTBS3+8JFZ1	SCREW	8	
4	RGK0810-N3	SIDE ORNAMENT(L)	1	
5	RGK0811-N3	SIDE ORNAMENT(R)	1	
6	RGK0808-1M	SIDE PANEL(L)	1	
7	RHD30069	SCREW	2	
8	RKA0076-N	FOOT	4	
9	XTBS3+10JFZ1	SCREW	1	
10	XTB3+6G	SCREW	4	
11	RFKGRSHD81-S	FRONT PANEL ASS'Y	1	
12	RFKRSHD7-N	CASSETTE DOOR ASS'Y	1	
13	RGL0331-Q	PANEL LIGHT(A)	3	
14	RGL0332-Q	PANEL LIGHT(B)	1	
15	RGU1391-S	BUTTON	1	
16	RMB0478	CASSETTE DOOR SPRING	1	
17	XTBS26+8J	SCREW	7	
18	SHE170-2	P.C.B. SUPPORT	2	
19	XTB3+12JFZ	SCREW	4	
20	XTW2+6S	SCREW	2	
21	RJR0113	CONNECTOR(4P) (CP305)	1	
206	RFKRSTR979	HEAD BLOCK ASS'Y	1	
206-1	RHD17015	AZIMUTH SCREW	2	
206-2	RMB0352-1	SPRING	1	
206-3	RMQ0360A	CONNECTOR HOLDER	1	
207	RDV108ZA	BELT	1	
208	RDK0019A-1J	MAIN GEAR	1	
220	RXG0036	REEL TABLE GEAR	2	
221	RXL0106	IDLER LEVER	1	
222	RXP0052	PINCH ROLLER(F) ASS'Y	1	
222-1	RMB0259	SPRING	1	
223	RXP0053	PINCH ROLLER(R) ASS'Y	1	
223-1	RMB0260	SPRING	1	
224	RDG0206-1	GEAR	1	
225	RDG0209A	GEAR	1	
226	REM0036-1	CAPSTAN MOTOR ASS'Y	1	
227	REM0043	REEL MOTOR ASS'Y	1	
228	RHD26013	SCREW	4	
229	RMQ0537	DRIVE GEAR	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
231	RXG0037	GEAR ASS'Y	1	
232	RMQ0536	DRIVE RACK	1	
233	RYF0334B-K3	CASSETTE HOLDER	1	
233-1	RMC0310	SPRING	2	
233-2	RMB0397	SPRING	1	
239	XTW2+6S	SCREW	2	
240	RXR0018	REEL TABLE	2	
241	XTW2+5L	SCREW	2	
C101,02	ECUV1H221KBN	50V 220P	2	
C105,06	ECEA1EKA4R7B	25V 4.7U	2	
C107,08	ECEA0JKA470B	6.3V 47UF	2	
C109,10	ECUV1H561KBN	50V 560P	2	
C111,12	ECUV1E183KBN	25V 0.018U	2	
C113,14	ECUV1H331KBN	50V 330P	2	
C115,16	ECEA1EKA4R7B	25V 4.7U	2	
C119,20	ECEA1EKA4R7B	25V 4.7U	2	
C121	ECEA1HKAR33B	50V 0.33UF	1	
C122	ECUV1E223KBN	25V 0.022U	1	
C123	ECUV1E153KBN	25V 0.015U	1	
C124	ECUV1H102KBN	50V 1000P	1	
C125	ECEA1AKA220B	10V 22U	1	
C126	RCE1AKA101BG	10V 100U	1	
C127	RCE1CKA100BG	16V 10U	1	
C128	ECEA0JKA470B	6.3V 47UF	1	
C130-32	ECUV1H331KBN	50V 330P	3	
C133	ECEA1HKA010B	50V 1U	1	
C134	RCE1HKA3R3BG	50V 3.3U	1	
C141	ECUV1H471KBN	50V 470P	1	
C144	ECUV1H471KBN	50V 470P	1	
C145,46	ECUV1H332KBN	50V 3300P	2	
C150	ECUV1E104ZFN	25V 0.1U	1	
C203,04	ECEA1EKA4R7B	25V 4.7U	2	
C205,06	ECEA1HKA010B	50V 1U	2	
C207,08	ECUV1H820JCN	50V 82P	2	
C211,12	ECUV1H152KBN	50V 1500P	2	
C213,14	ECEA1EKA4R7B	25V 4.7U	2	
C215,16	RCE1CKA100BG	16V 10U	2	
C217,18	ECEA1HKAR68B	50V 0.68U	2	
C219	ECEA1CKA101B	16V 100U	1	
C220	ECA1AM471B	16V 470U	1	
C221,22	ECEA1HKAR68B	50V 0.68U	2	
C223	RCE1CKA100BG	16V 10U	1	
C239,40	ECUV1H681KBN	50V 680P	2	
C303	ECQP2E472JZT	250V 4700P	1	
C304	RCE1AKA101BG	10V 100U	1	
C305	ECEA1HKA0R1B	50V 0.1U	1	
C306	ECQB1H393JF3	50V 0.039U	1	
C307	ECUV1H102KBN	50V 1000P	1	
C308	ECUV1H332KBN	50V 3300P	1	
C309	ECEA0JKA470B	6.3V 47UF	1	
C310,11	ECUV1E333KBN	25V 0.033U	2	
C312	ECEA1HKN2R2B	50V 2.2U	1	
C323	ECUV1H102KBN	50V 1000P	1	
C601,02	ECUV1E104ZFN	25V 0.1U	2	
⚠ C603	ECA1EM222E	25V 2200U	1	
⚠ C604	ECA1EM102B	25V 1000U	1	
C606	ECUV1E104ZFN	25V 0.1U	1	
C607	ECA1AM471B	10V 470UF	1	
C608	RCE1AKA101BG	10V 100U	1	
C609	ECUV1H103KBN	50V 0.01U	1	
C611	ECEA1HKA010B	50V 1U	1	
C613	RCE1AKA470BG	10V 47U	1	
C614,15	ECUV1H103KBN	50V 0.01U	2	
C616,17	ECUV1H102KBN	50V 1000P	2	
C618	RCE1CKA100BG	16V 10U	1	
C619	ECUV1H102KBN	50V 1000P	1	
C701	ECUV1E104ZFN	25V 0.1U	1	
C702	ECEA0JKA101B	6.3V 100U	1	
C705	ECUV1H103KBN	50V 0.01U	1	
C706	ECST0JY335RR	6.3V 3.3U	1	
C707,08	ECUV1H103KBN	50V 0.01U	2	
C712-15	ECUV1H101KCN	50V 100P	4	
C810	ECUV1E104ZFN	25V 0.1U	1	
C811	ECEA1EKA470B	25V 47U	1	

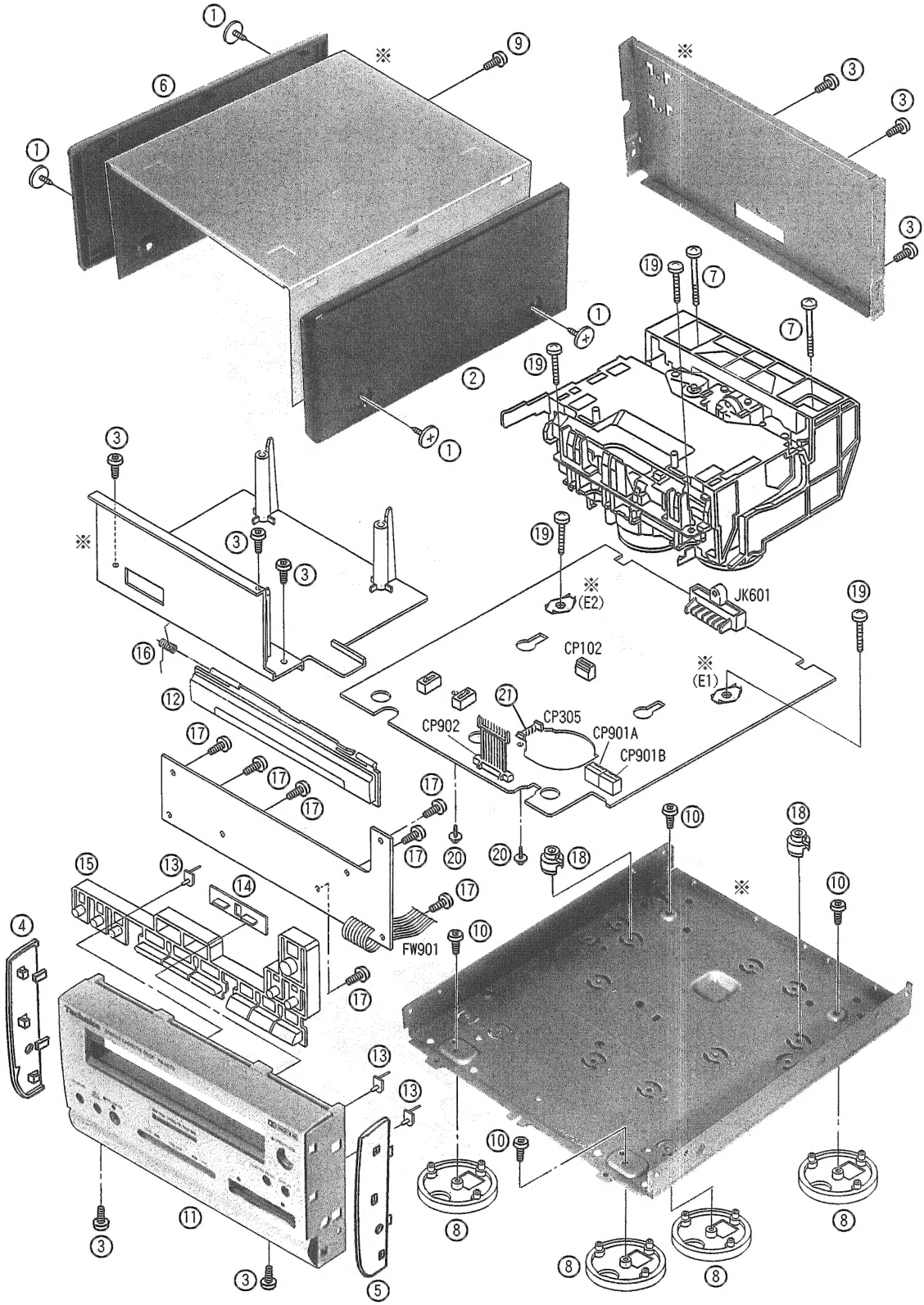
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C812	ECUV1H101KCN	50V 100P	1	
C813	RCE1AKA101BG	10V 100U	1	
C814,15	ECUV1H101KCN	50V 100P	2	
C816	ECUV1E104ZFN	25V 0.1U	1	
C819	ECST1AX106RR	10V 10U	1	
C901	ECUV1H101KCN	50V 100P	1	
C902	ECUV1E104ZFN	25V 0.1U	1	
C903	ECUV1H101KCN	50V 100P	1	
C912-17	ECUV1H101KCN	50V 100P	6	
CP102	RJS2A0205-2S	CONNECTOR(5P)	1	
CP901A	RJS1A1704	CONNECTOR(4P)	1	
CP901B	RJS1A1704	CONNECTOR(4P)	1	
CP902	RJT071H11A	CONNECTOR(11P)	1	
CS971	RJU071H11M	CONNECTOR(11P)	1	
D201	MA110TX	DIODE	1	
D301	MA110TX	DIODE	1	
⚠ D603-06	RL1N4003N02	DIODE	4	
D609	MA723TA	DIODE	1	
⚠ D610	MTZJ10BTA	DIODE	1	
⚠ D611	MTZJ8R2CTA	DIODE	1	
⚠ D612	MTZJ5R6BTA	DIODE	1	
D613	MA723TA	DIODE	1	
⚠ D614,15	MA110TX	DIODE	2	
D705,06	MA110TX	DIODE	2	
⚠ D707	MTZJ5R1BTA	DIODE	1	
D708,09	MA110TX	DIODE	2	
D802	MA188TA	DIODE	1	
D901	SLR-305VC	L.E.D.	1	
D904	MA110TX	DIODE	1	
D905	SPR-305MDTF	L.E.D.	1	
D906	MA110TX	DIODE	1	
D907	SPR-305MDTF	L.E.D.	1	
D908,09	SLR-305VC	L.E.D.	2	
D910,11	MA110TX	DIODE	2	
D971	RVD1SS133TA	DIODE	1	
FW901	REZ0885	FLAT CABLE(8P)	1	
IC101	A1898QT6BC	IC	1	
IC103	BA7755AF	IC	1	
IC201	CXA1102M-T4	IC	1	
IC701	M37471M4685F	IC	1	
IC802	BA6265AFP-E1	IC	1	
IC901	BU2040F-T2	IC	1	
IC971,72	RVSGP2S24BC	IC	2	
JK601	RJT065K15	SYSTEM CONNECTOR(15P)	1	
L201,02	SLQX303-1KT	COIL	2	
L301	RL08C006M-T	COIL	1	
L302	RLQZB470KT-D	COIL	1	
L701	RLQA100JT-Y	COIL	1	
L702	RLQZP1R0KT-Y	COIL	1	
L901	RLQA100JT-Y	COIL	1	
Q101-06	2SJ163PQRTX	TRANSISTOR	6	
Q107	DTA114EUT106	TRANSISTOR	1	
Q111	2SD601ATX	TRANSISTOR	1	
Q112	DTA114EUT106	TRANSISTOR	1	
Q113,14	2SD1328TX	TRANSISTOR	2	
Q201,02	2SJ106GBT85L	TRANSISTOR	2	
Q301	2SD601ARTX	TRANSISTOR	1	
Q302	2SD1328TX	TRANSISTOR	1	
Q303,04	2SD874QRSTX	TRANSISTOR	2	
Q305,06	DTC144EUT106	TRANSISTOR	2	
⚠ Q602,03	2SD2137PQTA	TRANSISTOR	2	
⚠ Q605	2SD2137PQTA	TRANSISTOR	1	
Q606	2SD601ATX	TRANSISTOR	1	
⚠ Q609	2SD2137PQTA	TRANSISTOR	1	
Q701-03	2SD601ATX	TRANSISTOR	3	
Q706	UN5214TX	TRANSISTOR	1	
Q804	2SD1328TX	TRANSISTOR	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
⚠ Q901,02	DTA114EUT106	TRANSISTOR	2	
Q903,04	2SB709ATX	TRANSISTOR	2	
R101,02	ERJ6GEYJ682V	1/10W 6.8K	2	
R103,04	ERJ6GEYJ104V	1/10W 100K	2	
R105,06	ERJ6GEYJ102Z	1/10W 1K	2	
R107,08	ERJ6GEYJ820V	1/10W 82	2	
R110	ERJ6GEYJ334V	1/10W 330K	1	
R111,12	ERJ6GEYJ101Z	1/10W 100	2	
R113,14	ERJ6GEYJ103V	1/10W 10K	2	
R117	ERJ6GEYJ123V	1/10W 12K	1	
R118	ERJ6GEYJ102Z	1/10W 1K	1	
R119,20	ERJ6GEYJ330V	1/10W 33	2	
R121,22	ERJ6GEYJ225V	1/10W 2.2M	2	
R123-26	ERJ6GEYJ104V	1/10W 100K	4	
R127,28	ERJ6GEYJ222V	1/10W 2.2K	2	
R129	ERJ6GEYJ333V	1/10W 33K	1	
R130	ERJ6GEYJ273V	1/10W 27K	1	
R131	ERJ6GEYJ562V	1/10W 5.6K	1	
R132	ERJ6GEYJ104V	1/10W 100K	1	
R133	ERJ6GEYJ103V	1/10W 10K	1	
R135	ERJ6GEYJ334V	1/10W 330K	1	
R137	ERJ6GEYJ334V	1/10W 330K	1	
R141,42	ERJ6GEYJ103V	1/10W 10K	2	
R145	ERJ6GEYJ183V	1/10W 18K	1	
R148,49	ERJ6GEYJ562V	1/10W 5.6K	2	
R153,54	ERJ6GEYJ102Z	1/10W 1K	2	
R157,58	ERJ6GEYJ223V	1/10W 22K	2	
R159	ERJ6GEYJ104V	1/10W 100K	1	
R160	ERJ6GEYJ103V	1/10W 10K	1	
R165,66	ERJ6GEYJ104V	1/10W 100K	2	
R167-69	ERJ6GEYJ222V	1/10W 2.2K	3	
R170	ERJ6GEYJ472V	1/10W 4.7K	1	
R171	ERJ6GEYJ682V	1/10W 6.8K	1	
R172,73	ERJ6GEYJ122V	1/10W 1.2K	2	
R174	ERJ6GEYJ103V	1/10W 10K	1	
R176	ERJ6GEYJ392V	1/10W 3.9K	1	
R177	ERJ6GEYJ273V	1/10W 27K	1	
R178,79	ERJ6GEYJ334V	1/10W 330K	2	
R207,08	ERJ6GEYJ104V	1/10W 100K	2	
R209,10	ERJ6GEYJ102Z	1/10W 1K	2	
R213,14	ERJ6GEYJ392V	1/10W 3.9K	2	
R215,16	ERJ6GEYJ153V	1/10W 15K	2	
R217,18	ERJ6GEYJ222V	1/10W 2.2K	2	
R219	ERJ6GEYJ433V	1/10W 43K	1	
R220	ERJ6GEYJ220V	1/10W 22	1	
R221,22	ERJ6GEYJ221V	1/10W 220	2	
R223	ERJ6GEYJ220V	1/10W 22	1	
R230	ERJ6GEYJ103V	1/10W 10K	1	
R231	ERJ6GEYJ334V	1/10W 330K	1	
R241,42	ERJ6GEYJ822V	1/10W 8.2K	2	
R301	ERJ6GEYJ103V	1/10W 10K	1	
R302	ERJ6GEYJ182V	1/10W 1.8K	1	
R303	ERJ6GEYJ682V	1/10W 6.8K	1	
R304	ERJ6GEYJ223V	1/10W 22K	1	
R305	ERJ6GEYJ103V	1/10W 10K	1	
R306	ERJ6GEYJ223V	1/10W 22K	1	
⚠ R307	ERDS1FJ2R2	1/2W 2.2	1	
R308	ERJ6GEYJ102Z	1/10W 1K	1	
R309-11	ERJ6GEYJ472V	1/10W 4.7K	3	
R313	ERJ6GEYJ1R0V	1/10W 1	1	
R601,02	ERJ6GEYJ472V	1/10W 4.7K	2	
R603	ERJ6GEYJ820V	1/10W 82	1	
⚠ R605	ERD2FCJ4R7	1/4W 4.7	1	
⚠ R607	ERD2FCG100	1/4W 10	1	
R608	ERJ6GEYJ100V	1/10W 10	1	
R610	ERJ6GEYJ471V	1/10W 470	1	
R612,13	ERJ6GEYJ1R0V	1/10W 1	2	
R614	ERJ6GEYJ102Z	1/10W 1K	1	
R615	ERJ6GEYJ332V	1/10W 3.3K	1	
R616	ERJ6GEYJ103V	1/10W 10K	1	
R627,28	ERJ6GEYJ1R0V	1/10W 1	2	
R630	ERDS2TJ1R0T	1/4W 1	1	
R631	ERJ6GEYJ181V	1/10W 180	1	
R632,33	ERJ6GEYJ471V	1/10W 470	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R634,35	ERJ6GEYJ820V	1/10W 82	2	
R636,37	ERJ6GEYJ181V	1/10W 180	2	
R638	ERJ6GEYJ102Z	1/10W 1K	1	
R701,02	ERJ6GEYJ103V	1/10W 10K	2	
R704	ERJ6GEYJ472V	1/10W 4.7K	1	
R705	ERJ6GEYJ473V	1/10W 47K	1	
R708	ERJ6GEYJ472V	1/10W 4.7K	1	
R709	ERJ6GEYJ101Z	1/10W 100	1	
R710	ERJ6GEYJ102Z	1/10W 1K	1	
R711	ERJ6GEYJ104V	1/10W 100K	1	
R712	ERJ6GEYJ683V	1/10W 68K	1	
R715	ERJ6GEYJ472V	1/10W 4.7K	1	
R718	ERJ6GEYJ683V	1/10W 68K	1	
R721	ERJ6GEYJ103V	1/10W 10K	1	
R722,23	ERJ6GEYJ102Z	1/10W 1K	2	
R727	ERJ6GEYJ472V	1/10W 4.7K	1	
R728	ERJ6GEYJ103V	1/10W 10K	1	
R729	ERJ6GEYJ472V	1/10W 4.7K	1	
R736	ERJ6GEYJ103V	1/10W 10K	1	
R738	ERJ6GEYJ102Z	1/10W 1K	1	
R739	ERJ6GEYJ272V	1/10W 2.7K	1	
R740	ERJ6GEYJ473V	1/10W 47K	1	
R741	ERJ6GEYJ223V	1/10W 22K	1	
R742	ERJ6GEYJ103V	1/10W 10K	1	
R743	ERJ6GEYJ473V	1/10W 47K	1	
R744	ERJ6GEYJ102Z	1/10W 1K	1	
R745,46	ERJ6GEYJ103V	1/10W 10K	2	
R748	ERJ6GEYJ103V	1/10W 10K	1	
R750	ERJ6GEYJ103V	1/10W 10K	1	
R751	ERJ6GEYJ104V	1/10W 100K	1	
R806,07	ERJ6GEYJ103V	1/10W 10K	2	
R808	ERJ6GEYJ392V	1/10W 3.9K	1	
R810	ERJ6GEYJ103V	1/10W 10K	1	
R811-13	ERJ6GEYJ272V	1/10W 2.7K	3	
R820	ERDS2FJ2R2	1/4W 2.2	1	
R900	ERJ6GEYJ821V	1/10W 820	1	
R901	ERJ6GEYJ102Z	1/10W 1K	1	
R902	ERJ6GEYJ122V	1/10W 1.2K	1	
R903	ERJ6GEYJ152V	1/10W 1.5K	1	
R904	ERJ6GEYJ182V	1/10W 1.8K	1	
R905	ERJ6GEYJ222V	1/10W 2.2K	1	
R906	ERJ6GEYJ332V	1/10W 3.3K	1	
R907	ERJ6GEYJ472V	1/10W 4.7K	1	
R908	ERJ6GEYJ682V	1/10W 6.8K	1	
R909	ERJ6GEYJ123V	1/10W 12K	1	
R910	ERJ6GEYJ223V	1/10W 22K	1	
R911	ERJ6GEYJ683V	1/10W 68K	1	
R912	ERJ6GEYJ102Z	1/10W 1K	1	
R914	ERJ6GEYJ151V	1/10W 150	1	
R915	ERJ6GEYJ121V	1/10W 120	1	
R916	ERJ6GEYJ151V	1/10W 150	1	
R917	ERJ6GEYJ121V	1/10W 120	1	
R918	ERJ6GEYJ102Z	1/10W 1K	1	
R921,22	ERJ6GEYJ101Z	1/10W 100	2	
R924	ERJ6GEYJ821V	1/10W 820	1	
R925	ERJ6GEYJ102Z	1/10W 1K	1	
R926,27	ERJ6GEYJ473V	1/10W 47K	2	
R928	ERJ6GEYJ151V	1/10W 150	1	
R929	ERJ6GEYJ121V	1/10W 120	1	
R930	ERJ6GEYJ103V	1/10W 10K	1	
R931	ERJ6GEYJ151V	1/10W 150	1	
R932	ERJ6GEYJ121V	1/10W 120	1	
R933	ERJ6GEYJ103V	1/10W 10K	1	
R971	ERDS2TJ221T	1/4W 220	1	
R973,74	ERDS2FJ393	1/4W 39K	2	
RJ1-38	ERJ6GEY0R00Z	CHIP JUMPER	38	
S803,04	RSH1A024-U	SW	2	
S900-06	EVQPTD05Q	SW	7	
S909-12	EVQPTD05Q	SW	4	
S915	EVQPTD05Q	SW	1	
S971	RSH1A018-1U	SW	1	
S972-76	RSH1A019-2U	SW	5	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
SA1	QZZCFM	TEST TAPE	1	
SA2	QZZCWAT	TEST TAPE	1	
SA3	SZZ0L18	FLOIL AK-152	1	
SA4	RZZ0L02	SWAFLUID #56	1	
SA5	RZZ0L05	MOLYCOAT EM-20L	1	
VR102,03	EVNDXAA00B24	V.R	2	
VR803	EVNDXAA00B53	V.R	1	
X701	EFOEC8004T4	OSCILLATOR	1	
Z971	EXBF6L306SYV	COMBINATION PARTS	1	

■ Cabinet Parts Location



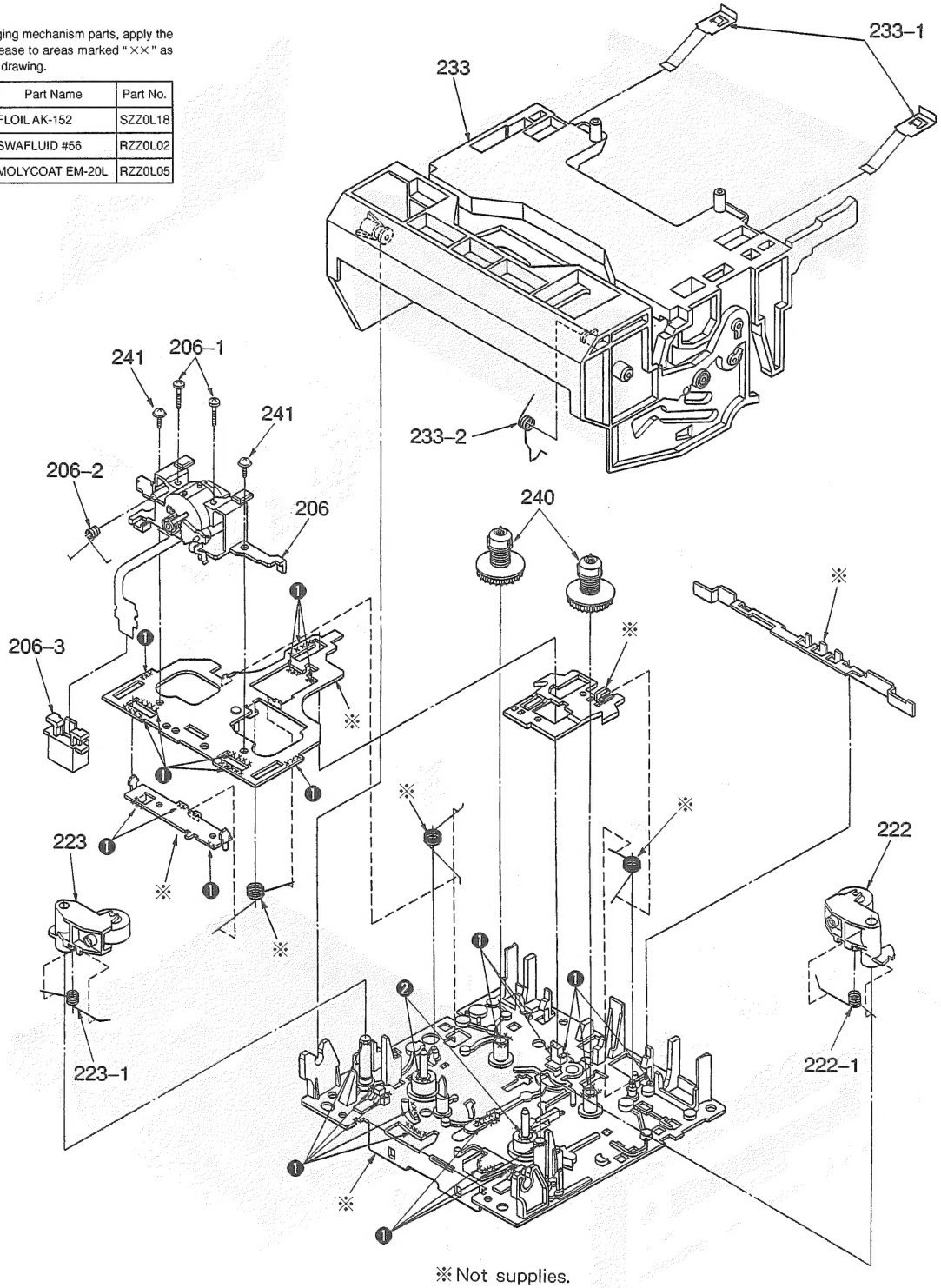
※Not supplies.

■ Loading Mechanism Parts Location

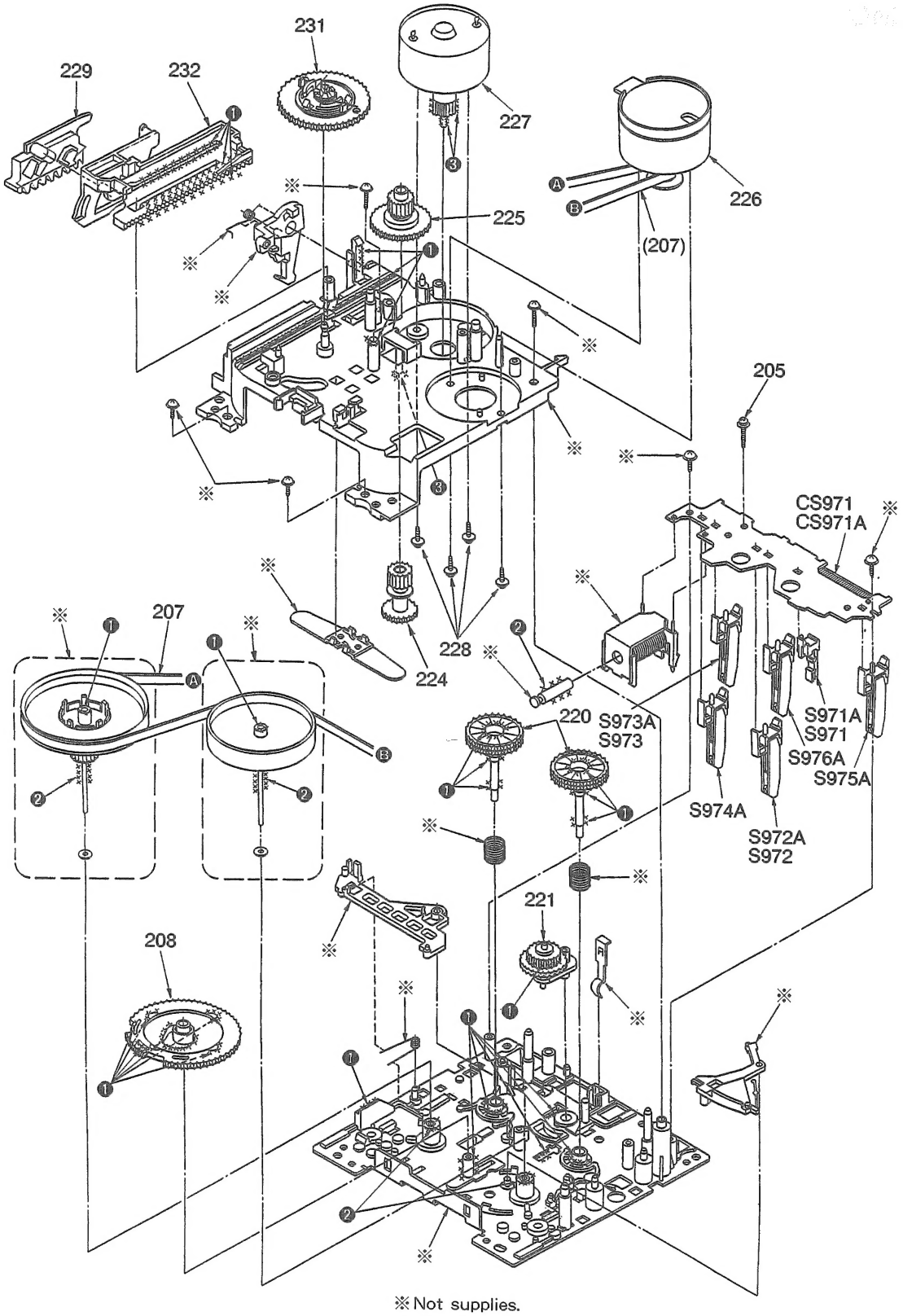
Note:

When changing mechanism parts, apply the specified grease to areas marked "××" as shownin the drawing.

Ref. No.	Part Name	Part No.
❶	FLOIL AK-152	SZZ0L18
❷	SWAFLUID #56	RZZ0L02
❸	MOLYCOAT EM-20L	RZZ0L05



※Not supplies.



※Not supplies.

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